

THE NOR-WEST FARMER.

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WINNIPEG, MANITOBA, MARCH 5, 1900.

\$1 a Year,
in advance.

The Horse Breeders' Convention.

The annual convention of the Horse Breeders' Association of Manitoba and the Northwest Territories was held on Friday, Feb. 23rd, in the City Hall, Winnipeg. There were morning and afternoon sessions. The attendance at the morning session was not large, but in the afternoon there was a first-class attendance and such interest and harmony prevailed that it was felt the convention

The privilege of paying the annual membership fee was given the members, and was responded to so liberally that by the close of the day there had been enrolled over 40 names.

PROPOSED ADVANCEMENTS.

Dr. S. J. Thompson struck a popular vein in a brief speech in which he expressed his opinion that the association had

wherever he went the farmers were interested in horse-talk, and so long as such a large proportion of the wealth of the country consisted in horses he thought that this association, having for its object the advancement of the legitimate interests of the breeders of horses in Manitoba and the Territories, would always have plenty of work.

OFFICERS AND DIRECTORS.

The election of officers resulted in the following appointments:

President, Dr. J. G. Rutherford, M.P., Portage la Prairie; vice-pres. for Manitoba, J. E. Smith, Brandon; vice-pres. for N.W.T., C. W. Peterson, Regina; treas., W. L. Puxley, Winnipeg.



Hon. J. A. Davidson,
Minister of Agriculture.



Hon. Thos. Greenway,
Ex-Minister of Agriculture.



Prof. W. A. Henry,
Director, Wisconsin Experiment
Station, Madison.



F. W. Hodson,
Dominion Live Stock Commissioner, Ottawa, Ont.



J. A. Grisdale,
Agriculturist, Experimental
Farm, Ottawa.

Some of the Speakers at the Conventions.

this year was very much in advance of any previous meeting.

The President, Dr. J. G. Rutherford, M.P., Portage la Prairie, occupied the chair, and in a short informal address outlined some of the questions which would come before the meeting.

The sec-treas., W. L. Puxley, then read the minutes of the last annual meeting which were adopted, as was also his yearly report. The financial standing was shown to be in good shape, there being on hand a surplus of some forty odd dollars.

The matter of medals given by the association to the Industrial was then discussed and it was recommended that a record be filed of the awarding of these from year to year.

hitherto stood too much in the background. They had had no part in the joint meeting of the various associations; their reports had not been published by the Department of Agriculture, as had those of the Cattle, Sheep and Swine, and Dairy Associations; they had been appointing no representative on the various local fair boards, nor had the diplomas given by them been advertised to any extent. He also suggested the publishing of a list of competent judges in heavy and light classes. He felt that the horse business of the country stood as one of the different branches of agriculture and that this association, as the representative of the horse breeding industry, had not risen to the standing which it should properly assume. The speaker had noticed that

Directors representing breeds: Clydes, Jno. Wishart, Portage la Prairie; Shires, J. A. S. Macmillan, Brandon; Standard-breds, Stephen Benson, Neepawa; Coach, J. W. Knittel, Boisbriand; Hackneys, Andrew Wishart, Portage la Prairie; Thoroughbreds, N. K. Boyd, Carberry. Other directors—S. J. Thompson, V.S., Winnipeg; R. I. M. Power, Carberry; W. W. Fraser, Emerson.

After the close of the morning session a meeting of the executive was held and R. I. M. Power was placed as representative on the Winnipeg fair board, and Geo. Harcourt, Winnipeg, was appointed as secretary of the association.

REMOUNT STATION.

The first matter to receive attention in the afternoon was the proposed establish-

ment in our Canadian West of a series of remount stations. The chairman read a communication from Major-General Hutton in regard to the matter, in which encouragement was given to the project. The fact that a great number of the horses and mules now being used in South Africa were obtained from points not within British territory was cited to show that we are not keeping abreast of our needs. It was argued that if this line of breeding could be secured it would soon result in the attracting of considerable British capital, and the industry would become quite a boon to the horse business of the ranches in the Territories.

C. W. Peterson, Deputy-Commissioner of Agriculture for the N.W.T., gave a splendid talk on the matter, showing that a similar proposition had been agitated by a few of the western horse raisers in the year 1892, but that the matter had then been dropped. He felt that if the style of horses needed for the cavalry was hard to obtain at present it was because there had been no encouragement for its production offered up to this time. It seemed now, however, as though the turning point had been reached. Recent developments in the Transvaal had clearly demonstrated that infantry, to be efficient, must be mounted, and the speaker felt that a general movement would be made by all advanced nations to secure a very much larger number of horses. The matter should certainly be taken up vigorously and energetically. The suggestion was made that if the free use of a tract of land could be granted by the Dominion to the Imperial Government for the raising and training of these horses the arrangement might be a satisfactory one. It was felt that more care would have to be given the ranch horses in the matter of care and handling, and probably in breeding also, before their raisers could hope to command this market.

Dr. Thompson believed that there would be found to exist a number of fairly well bred ranch horses, which, if taken up and cared for, would improve almost beyond expectation. The feeling of the meeting was that the ranchers would find from this time forward that it would pay better to raise fewer but better horses.

A number of those present spoke condemning the action of the agent of Lord Strathcona in purchasing in Montana the horses required for his contingent. The alleged reason for buying outside our borders, viz.: that the horses could not be procured here, was felt to be a very lame one. One member stated that 20 or 30 suitable horses could have been secured in his town, but no chance whatever had been given the owners to sell. As to the efficiency of our Canadian raised horses, no further evidence was needed than the great endurance evinced by those selected by the Mounted Police. It was felt that in the purchasing of these horses the intentions of Lord Strathcona had been subverted by those into whose hands the purchasing of horses had been given. Dealing directly upon this matter the following resolution was moved by N. K. Boyd, seconded by J. E. Smith, and carried unanimously:

"That this association place on record its disapproval of the statement attributed by the Calgary Herald to Dr. McEachern, the agent appointed by Lord Strathcona to purchase horses for his Mounted Rifles Corps, viz., that it is impossible to obtain horses suitable for military purposes in the Canadian West, and that it is necessary to bring in such animals from the United States."

"That the members of this association, knowing as they do, that large numbers of horses can be purchased in Manitoba and the N.W.T. at prices corresponding to those paid by the government for their

BREEDERS' DIRECTORY

CARDS under this head inserted at the rate of \$1.50 per line per year. No card accepted under two lines, nor for less than six months.

D. FRASER & SONS, Emerson, Man. Breeders and importers of Shorthorns, Shropshire and Southdown Sheep. Pedigree Poland China Pigs a specialty, from the best strains in the United States.

W. J. HELLIWELL, Oak Lake, breeder of Short-horn Cattle, Shropshire Sheep, Barred Plymouth Rocks, Light Brahmans and Partridge Cochins. All kinds of above young stock for sale. Prices right.

R. L. LANG, Spruce Bank Farm, Oak Lake, Man. breeder and importer of Shorthorn Cattle, improved Berkshire Swine, White Wyandottes and White Leghorns. Young stock for sale. 2448

W. M. MCBRIDE, importer and breeder of improved Chester White Pigs. Young stock for sale. Pairs and trios furnished not akin. Address—Wm. McBride, Box 253, Portage la Prairie, Man.

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KENNETH MCLEOD, Dugald, Manitoba. Chester White and Suffolk Pigs for sale. My stock are prize winners at the Winnipeg Industrial Exhibition.

JAS. TOLTON, Walkerton, Ont., importer and breeder of Shorthorn Cattle and Oxford Sheep. A number of exceptionally fine young bulls. Prices right.

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F. W. GREEN, Moosejaw, Assa., breeder and importer of high-class Shorthorns. Some fine young stock for sale, climatized to Western range.

K. McIVOR, Roselea Farm, Virden, breeder of Shorthorn Cattle and introducer and grower of Western (or native) Rye Grass. Seed for sale.

JOHN TURNER, "Bonny Brae Farm," breeder of Polled Angus Cattle. Young stock of both sexes for sale. Address, John Turner, Carroll, Man.

H. BYERS, Macgregor, Man., breeder of Jersey Cattle. Largest herd in the West, headed by Rover Pogis, No. 41020. Young stock for sale.

JAS. ROBERTSON, Beaver Brand Farm, Glendale P.O., Man. Poland China Pigs, Hereford Bull Calf; also Brome and Rye grass seed for sale.

A. J. MORRISON, Carman, Man. Breeders of Shorthorn cattle. One 11 and one 24 months old bulls of exceptional quality for sale.

W. C. EDWARDS & CO., North Nation Mills, P.Q. Importers and Breeders of Ayrshire Cattle, Shropshire Sheep and Berkshire Pigs. 1642F

J. VAN VEEN, breeder of Galloway and Hereford Cattle and Shropshire Sheep, Lake View Ranch, File Hills, Fort Qu'Appelle, Assa. 1588

BRAMPTON JERSEY HERD. Full stock of A. J. C. C. Cows, Heifers and Bulls. Extra quality. B. H. Bull & Son, Brampton, Ont.

W. C. EDWARDS & CO., Rockland, Ont., Importers and Breeders of Shorthorn Cattle, Shropshire Sheep and Berkshire Pigs. 1643F

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L. A. BRADLEY, Portage la Prairie, Manitoba, breeder of Tamworth Pigs. Young Pigs for sale.

JAMES RODGERS, Panima, Alta., breeder of Polled Angus Cattle. A few young bulls for sale.

F. J. COLLYER, Welwyn, Assa., breeder of Polled Angus and Berkshires. Young Pigs for sale.

W. M. SMITH, Fairfield Plains, Ont. Ayrshires, Southdowns, P. Chinas, Duroc Jerseys, Poultry.

WM. CHALMERS, Hayfield, Man., breeder of Shorthorn Cattle. Correspondence solicited.

GEO. ALLISON, Burnbank, Man., breeder of Shorthorns and Leicesters. Stock for sale. 2481

STEEL BROS., Glenboro, Manitoba. Breeders of Ayrshire Cattle. Young Stock for sale. 1731F

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THOS. MCCARTNEY, Longburn, Man. Ayrshire Cattle. A splendid pair of young bulls for sale.

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W. E. BALDWIN, Manitou, Man. Tamworths. Orders booked for young Pigs from imp. stock.

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WELLINGTON HARDY, Pomeroy, Man. Ayrshires and improved Yorkshires. 3 bulls for sale.

J. HENRY, Chater, Man., breeder of Berkshire Swine and W. P. Rocks. Write or call.

WALTER JAMES, Rosser, Man. Breeder of choice Shorthorn Cattle and Berkshire Swine.

JOSEPH TAYLOR, Fairfax, Manitoba, breeder of Shorthorn Cattle. Young stock for sale.

JAMES WILSON, Innisfail, Alta., breeder of Shorthorns. One fine Alberta-bred bull for sale.

F. MURDOCH, Bru, Man. Shorthorn Cattle. Yorkshire Swine and Shropshire Sheep.

JOHN S. GIBSON, Morden, Man. Shorthorns and Poland Chinas. Young stock for sale.

W. C. MURDIN, Plumas, Man., breeder of Ayrshire Cattle. Young bull for sale.

H. KINNEAR, Souris, Man., breeder of Short-horn Cattle. Young stock for sale.

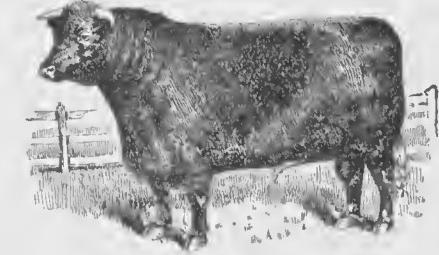
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My herd is one of the largest in America, both imported and Canadian bred. A very choice selection of both sexes always on hand for sale. Personal inspection invited. Address all communications:

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FOREST HOME FARM.

6 YOUNG BULLS by Manitoba Chief and Robie O'Day, and out of some of our best cows.

9 BERKSHIRE SOWS, of choice quality and breeding, from 5 months to 3 years.

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of first-class breeding for sale, in calf to imported bull Sir Colin Campbell.

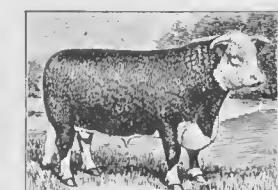
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call on or write

J. E. MARPLES, Poplar Grove Farm, Deleau, Man.

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Portage la Prairie.



Stephen Benson,
Neepawa.



C. W. Peterson,
Regina.



J. H. Irwin,
Neepawa.



N. K. Boyd,
Carberry.

Some of the Horsemen in attendance at the Conventions.

remounts, would condemn in the strongest possible manner the action of Dr. McEachern in endeavoring to create the impression that such is not the case."

There was received from the Calgary Board of Trade a copy of a similar resolution passed by that body, in regard to this matter, and another resolution was passed concurring with its expressions.

A communication was received from J. H. G. Bray, of Medicine Hat, suggesting the appointment of a deputation to confer with the Western Stock Growers' Association at their next annual meeting, to be held in Medicine Hat early in April in regard to the matter of establishing remount stations. The following deputation was appointed:—Drs. Rutherford and Thompson, and Messrs. R. I. M. Power, J. E. Smith, C. W. Peterson and N. K. Boyd.

HORSE INSPECTION.

The matter of the inspection of horses coming into the province was next taken up. Evidence was not wanting to show that a great deal of the alleged inspection in the past had been a farce and a deception. Carloads of horses had been passed where the man with the work in charge had stood on the outside of the car and had assumed to inspect a carload of wild horses within. This style of work was not only useless, but positively harmful, as it led the farmer to believe that the horses were beyond suspicion, and so threw him off his guard in purchasing. The following resolution dealing with this matter was moved by R. I. M. Power, seconded by James Dale, and carried unanimously:

HIGHER MINIMUM VALUATION.

"That this association press upon the Dominion Government the absolute necessity of providing for the strictest examination of all horses coming into this province, and that we must condemn the unsatisfactory manner in which this inspection has been conducted in the past."

The resolution in regard to remount stations, moved by Mr. Power, and passed at a recent meeting of the executive (published in our Feb. 5th issue), was heartily

endorsed and a unanimous request was passed asking the President to use his influence to forward the matter in whatever way he finds possible.

The low valuation of horses imported from the U.S. into Manitoba and the Territories was taken up. The import records showed that during the fiscal year ending with the 30th of June last there had been imported into Manitoba and the Territories from the States over 10,500 horses at an average valuation of \$27.60. This was exclusive of horses which had come in as settlers' effects. A resolution was moved by J. S. Robson, seconded by Hy. Irwin, and passed, expressing surprise at the low valuation of our horse imports and memorializing the Dominion Government to place a minimum valuation of \$50 per head upon all horses imported, this regulation, of course, to be suspended in the case of horses brought in as settler's effects.

STALLIONS FOR THE INDIANS.

The deplorable conditions which prevail upon the Indian reserves in regard to the running at large of cayuse stallions, and the utter lack of any attempt to improve the stock of horses owned by the Indians was discussed. It was shown that not only was there being no advancement made in the quality of the ponies raised by the Indians, but that the scrub stallions kept on a number of the western reserves were doing a good deal to deteriorate the quality of the stock of surrounding ranchers. The following resolution, moved by Power and seconded by Benson, was passed unanimously:

"That this association learns with regret that scrub stallions are permitted to run at large on Indian reserves to the detriment of settlers in the various districts affected, and that the Indian horses are rapidly deteriorating in consequence of this practise; that this association begs to draw the attention of the Dominion Government, and especially the members of parliament for Manitoba and the Northwest Territories, to the great importance of placing at the disposal of the Indians a sufficient number of stallions of pure

breeding as to ensure the same improvement in their horses as has been attained in connection with Indian cattle through the introduction of pure bred males."

OTHER APPOINTMENTS.

The following further appointments were made as representatives to the various fair boards:—Portage la Prairie, Jas. Bray; Brandon, J. E. Smith; Hamiota, Oak River and Rapid City, J. R. Rankin; Neepawa, Hy. Irwin; Carberry, N. K. Boyd; Holland, Glenboro and Cypress River, J. H. Lipsett, V.S.; Baldur and Belmont, Jas. Dale; Boissevain, J. W. Knittel; Gladstone H. R. Keyes; Manitou, J. S. Robson; Souris, J. A. S. Macmillan; Emerson, W. W. Fraser; Kildonan and Springfield, A. Patterson. Further appointments to fair boards were left to the executive.

The executive appointed Messrs. Boyd and Power to interview the proper Government authorities in regard to the placing of the Horse Breeders' Association on a better footing. We believe these gentlemen in their interview received every encouragement.

Messrs. Harcourt, Puxley and Thompson were also appointed a deputation to wait upon the C. P. R. in order to secure if possible some conciliations in the matter of freight rates.

The very greatly increased interest and perfect harmony of the whole convention indicates a strong up-turn in the history of the association and bespeaks for it a much greater importance in the not distant future.

Geo. Martin, Saltcoats, Assa., Feb. 1, 1900:— "I have much pleasure in renewing my subscription to The Nor'-West Farmer for 1900, as I think it is the best I take, because I am able to glean a lot of useful information from it, and I find it is becoming a popular paper in our district."

Wm. Channon, Cordova, Man., Jan. 22, 1900:— "Enclosed find renewal for your very useful paper, and since subscribing for some we have noticed the rapid improvement that has taken place, and we claim that it is a paper that all farmers in this western country should take. We have been assisted in our small operations on the farm by The Farmer's timely hints, etc."



J. E. Morgan,
Shoal Lake.



J. G. Washington,
Ninga.



J. A. McGill,
Neepawa.



M. McKellar,
Pilot Mound.



R. J. Dobbyn,
Melita.

Some of the Stockmen in attendance at the Conventions.

Misunderstood.

Our readers will remember that we mentioned in a former issue the regrettable and untimely loss to the Horse Breeders' Association of Beautiful Plains of their standard-bred stallion Pliny, and also that we have made note of their intention to purchase another standard-bred to fill his place.

In our issue of Feb. 5th, in an article headed "The Horse for Manitoba," we published a letter from Dr. Hopkins, of Madison, Wis., to this Association, in which he encourages the breeding of the heavier lines of horses. In a general way we signified our accord with the breeding of our ordinary work horses into heavier lines, recognising that in Western Canada to-day the sort of stallion most needed for crossing on the ordinary mares of the country lies in the way of something which will produce the strong work horse rather than in the way of indiscriminate crossing of cold-blooded mares with the light breeds, and the production of the inferior stock which must inevitably follow. We believe the Neepawa breeders felt that this was a hit at them. It was not intended so, but for the information of our readers in general we might bring forward the fact that in the district in question a first-class assortment of well-bred horses in all lines can be seen. We understand that the heavy breeds are well served in a breeding way by excellent heavy stallions, and that there is also a good collection of stallions of the heavier light breeds, but no standard-bred. We have it from a competent judge that the exhibit of light horses at Neepawa in '99 was very high in comparison with that made at other points in the Province. The owners believe that there is a very evident market in that locality for drivers, and that a number of the mares should be crossed with a standard-bred. In advertising for a stallion, the weight was fixed at not less than 1,250 lbs. and height at not less than 16 hands; he also had to show in his pedigree breeding rather than speed.

Being misunderstood, we make this explanation, but at the same time wish to emphasize, as we said before, the need in general amongst our farmers of the production of good weight and useful horses, rather than the indiscriminate crossing of work mares with the light breeds, hoping against hope for the production of fast horses rather than useful ones.

We have received from the Secretary of the advanced Holstein Registry, Yorkville, N.Y., a list of official seven-day tests made during the month of November, 1899. Seven cows, 5 years or over, averaged 408½ lbs. milk, making 17 lbs. butter, allowing 80 per cent. butter fat to a pound of butter. Four-year-olds averaged at same scale 15 lbs. 4 oz. butter. Three-year-olds 10 lbs. 5½ oz. and two-year-olds 10 lbs. 5½ oz. butter.

Shire horses are the pet fancy of the English rural aristocracy. The other day Hon. Victor Cavendish sold a breeding stud of 46 head, at an average of \$725. Mares of choice points are worth more than stallions. One mare went at \$3,636, another at \$2,880 and so on. The greatest sire of the breed now living is Harold (3703), and he is now rising 19 years, a remarkable age for a show horse of his weight. At a later date 40 animals owned by Capt. Duncombe sold at an average of \$716; three 4-year-old mares averaging \$1,400. Another lot, owned by Sir Jas. Blyth, made an average of \$580 for 45 head.

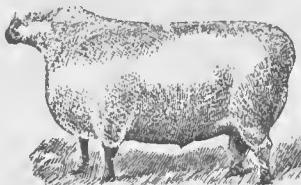
Alex. McLay, Horse Hills, Alta., Jan. 20, 1900.
"Could not get along on the farm without The Farmer."

J. A. S. MACMILLAN

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Clydesdale, Shire and Hackney**STALLIONS,**

Has a few choice ones for sale; also

Pure Bred Shropshire Sheep.

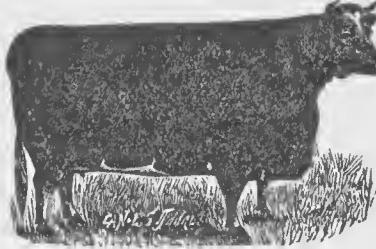
Rams and ewes from the most fashionable imported blood. Inspection invited. For full particulars apply—

2236 Box 483, BRANDON, MAN.

Elmwood Stock Farm**SCOTCH SHORTHORNS.**

For sale 3 grand young bulls, all got by imported sires, and out of extra good cows by imported bulls.

H. O. AYEARST, MIDDLECHURCH, MAN.

Choice Young Bulls for Sale!

Sired by **TOPSMAN**, the champion Short-horn Bull at Winnipeg and Toronto in 1899, and **STANLEY 6th**.

Anyone wishing to obtain a bull possessing individual merit and of high breeding can make no mistake in writing

J. G. BARRON, Carberry, Man.

CHOICE YOUNG Shorthorns

I offer 8 choice young Bulls, sired by prize-winning sires; also a few Heifers, 1 and 2 years old.

For particulars, write—

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Bulls! Bulls! Bulls!

I will undertake commissions to select pure-bred bulls of any breed for ranchmen, and will attend to their careful shipment. Correspondence solicited.

WM. SHARMAN,
Ridgewood Farm, - Souris, Man.**BROOKSIDE - STOCK - FARM,**
SHORTHORNS FOR SALE

2 very fine bulls, 12 months old, got by Crimson Chief (24057). Also a few females.

ROBERT WHITE - Wakopa, Man.

LARGE ENGLISH BERKSHIRES

A few Sows fit to breed, also some August Pigs. Am breeding some first-class Sows for spring litters. Two first-prize Boars at head of herd. Now booking orders.

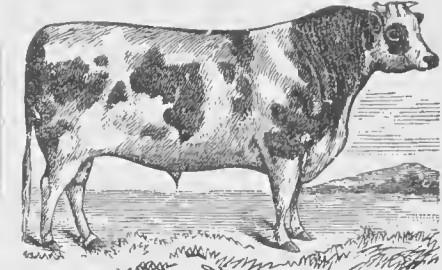
Write for prices.

JOSEPH LAIDLAW, - - Neepawa, Man.

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Marchmont Stock Farm.**SCOTCH - BRED SHORTHORNS**8 YEARLING BULLS,
8 BULL CALVES,

Of great quality and breeding, at moderate prices.

W. S. LISTER, Middlechurch P. O.,
Telephone. (7 miles North of Winnipeg.)**Holsteins, Yorkshires, Berkshires**

Holstein bull, 1 yr. 1 heifer, 3 yrs, in April, due to calve Mar. 20. Yorkshires, all ages, on hand. Orders for spring delivery of Yorkshires and Berkshires booked now. A. B. POTTER, Montgomery, Assa.

OAK GROVE FARM.**SHORTHORN CATTLE and
LARGE, IMPROVED YORKSHIRE SWINE**

Among the Shorthorns recently imported from Ontario, I have for sale a few very fine heifers, also a fine bunch of sows with pig, and a few choice boars fit for service.

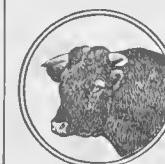
Orders booked now for Young Pigs.

JAS. BRAY, Longburn, Man.

**PLAIN VIEW STOCK FARM.**

The home of Shorthorns, Cotswolds and Berkshires. The most successful herd of Berkshires in the Dominion in the leading Fairs during the last 4 years. My Berkshires consist of 4 of the best Boars and 16 of the best breeding Sows I ever had, all prize winners. Bulls, Boars, Sows, Ram Lambs and Barred Rocks for sale at reasonable prices. Booking orders for spring stock. My herds are not large, but choice. Come and see them, or write for prices.

F. W. BROWN, Prop., Portage la Prairie.

PIONEER HERD OF SHORTHORNS

WALTER LYNCH, Westbourne, Man.

MAPLE CLIFF DAIRY**and Stock Farm.**

Ayrshire Cattle, Large English Berkshires, Improved Tamworths.

Young stock for sale at all times. Farm within 5 minutes' walk Cen. Experimt. Farm.

R. REID & CO., HINTONBURG, ONT.

Pure-Bred Cattle Breeders' Convention.

The attendance at the ninth annual convention was very large. Walter Lynch, Westbourne, the president, presided, and in his annual address, which was a pithy and humorous one, he said he was sorry he could not congratulate the stockmen on the present outlook. A year ago there were quite a number of Manitoba breeders in Ontario looking for stock; to-day he did not know of one. He thought that this state of affairs was due to the policy adopted by the C.P.R. in distributing free sires throughout the country. To him it looked like a deliberate attempt to smash the stock business. He hoped that when this subject came up for discussion it would be thoroughly threshed out. Turning to others matters, he said that Providence, the next highest power in the land to the C.P.R., had been kind and good to us.

The minutes of the last meeting were read and approved. The secretary read his report, showing an increase of 30 per cent. in the membership, and that the year had been the most progressive one in the history of the Association. The diplomas

V.P. for the N.W.T., Angus MacKay, Indian Head; Sec.-Treas., G. H. Greig.

Directors—Shorthorns, W. W. Fraser, Emerson; Herefords, J. A. McKellar, Brandon; Holsteins, J. Glennie, Longburn; Ayrshires, Thos. McCartney, Longburn; Polled Angus, J. Traquair, Welwyn; Galloways, Wm. Martin, Winnipeg; Jerseys, J. Jickling, Carman; Auditors, R. Waugh and H. McKellar.

REPRESENTATIVES TO FAIR BOARDS.

Winnipeg Industrial—Jas. Bray, Longburn.

Brandon—Wm. Chalmers, Hayfield. Carberry—J. G. Barron, Carberry. Neepawa—G. S. McGregor, Mekiwain. Boisbriand—J. G. Washington, Ninga. Portage la Prairie—Thos. Wallace, Portage la Prairie.

Gladstone—H. R. Keyes, Midway. Deloraine—John Renton, Deloraine. Pilot Mound—James Morrow, Pilot Mound.

Carman—W. Hardy, Pomeroy. Killarney—Wm. Ryan, Ninga.

try and creamery butter have been gaining in favor. These advantages have not come to us by mere chance, but have been secured, and can only be retained, by careful work and the intelligent application of the best methods.

Our reputation for beef is not so good, doubtless owing to the fact that our cattle have not been as well finished as the corn-fed article from over the line. The English consumer is in a position to demand, and is willing to pay for, the best the world can supply. I fail to see any good reason why we cannot build up as good a reputation for our beef as we have already secured for our bacon. Canadians have given ample proof at the foremost American fairs that they have herds on which to draw that are quite as good as the best; especially is this true of the Shorthorn and Ayrshire breeds.

If there was but one object in keeping stock, and that the enriching of the soil, any class of cattle would answer the purpose of converting good grass and grain into manure (it is too frequently the case that the cattle we see in the country are of little use for any other purpose); but in order to realize a direct profit on the carcass for the original cost, as well as for food consumed and labor expended, only cattle of good quality and breeding must be kept, the better the quality the greater the profit.



Walter Lynch,
Westbourne.



C. C. Castle,
Teulon.



Geo. Steel, M.P.P.,
Glenboro.



Wm. Sherman,
Souris.



Andrew Graham,
Pomeroy.

Some of the Stockmen in attendance at the Conventions.

of the Association were offered to agricultural societies in the Territories last year as well as to those in Manitoba. The financial statement was a very satisfactory one, showing a balance on hand of \$232.70. The Government grant was increased last year to \$200. A pleasing feature of the season's work was the grant of \$500 by the Dominion Shorthorn Breeders' Association towards the Winnipeg prize list.

Representatives to the different Fair Boards made their reports, and on the whole showed a very satisfactory state of affairs. Mr. McGregor, while making his report on Neepawa fair, asked for the decision of the meeting on a point that had come under their notice. A man bought a pure-bred cow, but did not register her. Though not registered, she is eligible for registration. Can she be shown as a grade? This raised quite a discussion, the general opinion being that she should not be allowed to show as a grade. On motion of J. E. Smith, Brandon, it was decided that in case anyone wants to exhibit a pure-bred animal, not registered, as a grade, he must sign a declaration that such animal is not eligible for registration.

OFFICERS AND DIRECTORS.

The election of officers followed—Hon. Life President, Walter Lynch, Westbourne; Pres., Geo. Steel, M.P.P. Glenboro; 1st V.P., A. Graham, Pomeroy; 2nd V.P., F. W. Brown, Portage la Prairie;

The first paper on the afternoon's programme was by Andrew Graham, Pomeroy, and he was greeted by a full house, many men coming in on purpose to hear this paper, and the discussion which was to follow.

FREE TRANSPORTATION OF PURE-BRED STOCK.

Manitoba is pre-eminently an agricultural country, nearly all classes of her citizens being almost entirely dependent on the resources of the soil. The lesson has been learned at great cost by older countries than ours that the system of continually taking from the soil and returning nothing thereto inevitably brings disappointment, and tends to poverty. This brings us once more face to face with the old, old subject of mixed farming, which we will not stop longer to discuss.

Admitting the necessity of stock on the farm, in order to keep up its fertility, the point next to be settled is the class of stock to be kept in order to secure the greatest returns for labor and capital invested. If we would arrive at an intelligent conclusion in this matter, the market of our surplus stock, and the requirements of that market, must be carefully considered. Of late years we have been very successful, notwithstanding keen competition, in building up a very enviable reputation in England for our cheese, bacon, and, more recently, our dressed pou-

What a tremendous breeding ground—from the Red River to the Rockies; where only a half century ago millions of buffalo roamed and fattened at pleasure. With ranching districts of this great area stocked to their capacity with cattle of the right class, and those districts especially adapted to grain production sending their coarse grains and roughage to market in the early spring in the shape of well-bred and well-fattened steers, what a tremendous business would result for the transportation companies, with nearly two thousand miles between this vast breeding ground and the seaboard on the way to the markets of the world—a business that has already assumed large proportions—a business that is increasing in magnitude by tremendous strides—a business that has been to a large extent made possible through the energy and enterprise of the breeders of pure-bred stock throughout Manitoba and the Northwest Territories. These men have frequently visited the leading Eastern herds, and returned with the very best that money could procure. They have asked few favors of the transportation companies, and, until recently, have received very few. Doubtless the C.P.R. alone have received thousands of dollars annually for the transportation of pure-bred stock for breeding purposes, the product of which have already impressed themselves on the stock of the country, and in this way have swelled the dividends of the company through the increased carrying business to the seaboard.

We have a country with the most unlimited possibilities for the production of beef and pork, and our products should rank with the best on the markets of the world. The rapid improvement in the general quality of our flocks and herds should be the aim of every farmer and stockman as well as of the transportation companies, and if the interest of our farmers could be aroused to the great advantages that would result to them from the infusion of better blood into their herds and flocks, a long step would be taken in the right direction. We have had evidence within the last few months that the C. P. R. Company have become fully alive to the advantages that would accrue to them from the improvement of the stock of the country.

The present regulations for the transportation of pure-bred stock west of Lake Superior, in less than car-load lots, are as follows:

Bulls, under 6 months	500 lbs.
" over 6 months and	
under 1 year	1,000 lbs.
" over 1 year and un-	
der 2 years	3,000 lbs.
" over 2 years	4,000 lbs.
Other Cattle, 1 animal	2,000 lbs.
" 2 animals	3,500 lbs.
" 3 animals	5,000 lbs.
Each additional animal	1,000 lbs.

The rate on cattle in less than car-lots is single first class; when certificates of registration are produced, a discount of 50 per cent. will be allowed.

The following are the rates per 1,000 lbs.:-

50 miles	\$3.50
100 miles	5.40
200 miles	8.00
300 miles	10.20
400 miles	12.30
500 miles	14.30

These rates and weights only apply to animals when shipped at a valuation of \$50 and under. For every additional \$10 in value of the animal, 200 lbs. will be added to the weight, until the value of \$100 is reached. This additional weight is irrespective of age. A bull under one year, valued at \$100, will, under this rate, be shipped at 2,000 lbs. An animal, valued by shippers at over \$100 and up to \$400, will be shipped at 4,000 lbs. without regard to age, but the rate charged will be one and one-half first class. As an example of the working of the above, a registered bull under one year valued at \$50, that should be transported direct to the slaughter house and not permitted to perpetuate his worthlessness, will be shipped 500 miles for the sum of \$7.15; a scrub bull, under one year, will be shipped for \$14.30; but a bull valued at \$400, which is not an excessive price to-day, will cost for transportation \$42.90; and, strange as it seems under all these circumstances, the consignee is obliged to sign a contract fully releasing the company from responsibility; otherwise, in the case of the higher-priced animal, three times first class rates will be charged, or \$85.80.

The cost of shipping pigs and sheep, when crated, is double first class on actual weight.

The subject of our paper is "Free Distribution of Pure-Bred Stock." At first glance this would strike one as rather a peculiar proposition to a monied corporation that was not incorporated especially for philanthropic purposes, but a little closer investigation would force us to the conclusion that this departure from customary methods would prove a very important factor in the improvement of the herds and flocks of the country, and ultimately result in largely increased business to the company.

In the matter of aged bulls alone, free transportation would be of untold benefit.

HORSEMEN! THE ONLY GENUINE IS



See regular advertisement in last issue of this paper. Absolutely SAFE for any person to use. RELIABLE in results. Special information regarding any case sent FREE on request. Write for circulars. Price \$1.50 per bottle, express prepaid.

THE LAWRENCE-WILLIAMS CO.,
21 Front St. W. TORONTO, ONT.

D. McBETH, OAK LAKE, MAN.
BREEDER OF
Clydesdale Horses
AND
Shorthorn Cattle



I have a number of promising young Stallions for sale.

My Shorthorn herd is headed by "Best Yet," bred by Hon. John Dryden, of Brooklyn, Ont. A number of young stock of both sexes, all registered, are for sale, and can be recommended as first-class animals.

Correspondence solicited. Prices right.

R. REED-BYERLEY, Cook's Creek, Man., breeder and importer of Clydesdales. Headed by Gem Prince, sired by Cedric. Correspondence solicited.



For sale a few first-class registered

BERKSHIRE BOARS
ready for service, price \$15.

High-class B.P. Rock Cockerels.
2 or 3 excellent young Berkshire Sows in pig.
Wm. Kitson, Burnside, Man.

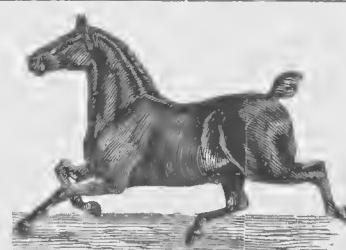
Farms and Stock
For sale at all times. Apply to
H. R. KEYES, - Midway, Man.

STALLIONS
FOR SALE.

One registered CLEVELAND BAY, Vol. 4, No. 1733, York, England; Vol. 2, No. 648, Springfield, III.

ONE PACING STALLION.

For further particulars apply to—
McCallum Bros., Moosomin, Assa.



COACH HORSE STALLION FOR SALE

The celebrated Yorkshire Coach Stallion KNIGHT OF THE VALE, Nos. 1799 and 999. KNITTEL BROS. desire to sell this stallion with the view of replacing him, as he has stood for service in the vicinity of Boissevain for six seasons. For particulars apply—
Boissevain P.O., Box 148.

THOS. SPEERS

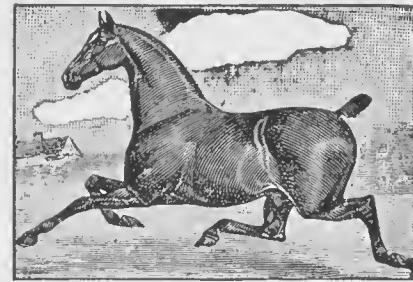
Oak Lake, Man.

Breeder and Importer of

SHORTHORN CATTLE



Among the bulls imported by me during the past five years, three have won the sweepstakes at Winnipeg. I have just returned from the East with a splendid bunch of Shorthorns, some of which are good enough to win in any company, if you want show or breeding stock. Am crowded for room, and will sell right. Write for what you want. Both sex.



HACKNEYS FOR SALE.

Several Hackney Stallions, pure bred and registered. Can also supply yearling Hackney Stallions in the spring, with three crosses (unregistered).

RAWLINSON BROS.
Box 20, CALGARY, ALTA.

Thorndale Stock Farm

JOHN S. ROBSON,
MANITOUE, MAN.

30 SHORTHORN BULLS
and as many
HEIFERS FOR SALE.



Write me before buying.

THORNCILFFE STOCK FARM.

Largest Stud of Clydesdales In Canada

Headed by the champion stallion
of all ages LYON MACGREGOR.

STALLIONS & COLTS from the best blood in Scotland and Canada.

AYRSHIRE BULLS & HEIFERS from imported stock.

BEST MILKING STRAINS with good teats.

TERMS REASONABLE.
A visit to Thorncilffe will repay you.

ROBT. DAVIES, Thorncilffe Stock Farm, TORONTO.

HOPE FARM

ST. JEAN BAPTISTE, MAN.

Headquarters for GALLOWAY CATTLE.

Apply to T. M. CAMPBELL, Mgr.

3 Shorthorn Bulls

For sale. Aged 3, 9 and 11 months.

For particulars, write

ISAAC MOORE, Cypress River, Man.

FOR SALE Thoroughbred Stallion

"GRAND COUP" (aged). Sure foal-getter. He was imported by the Quorn Ranch Co., of Calgary. Price reasonable. Apply to—

MCLEOD BROS.
Albion Hotel, - Portage la Prairie.

When writing advertisers, kindly mention The Nor-West Farmer.



Jas. Glennie,
Longburn.



W. S. Lister,
Middlechurch.



J. G. Barron,
Carberry.



W. W. Fraser,
Emerson.



Jas. Bray,
Longburn.

Some of the Stockmen in attendance at the Conventions.

Few breeders can make it pay to retain a bull in the herd longer than the third year, as heifers of his own get will by that time be ready for service. Owing to the high transportation rates on aged bulls, large numbers of them are fattened and slaughtered after a three years' term of service, when under proper care and treatment their usefulness should have been perpetuated up to three or four such terms of service. It is generally conceded that better results follow the use of mature sires than of immature animals. The annual loss to the country in the early slaughtering of these aged bulls is large, and is chiefly attributable to the high transportation rates.

Another concession the railway companies might make, to the mutual advantage of all concerned, is free passage or greatly reduced rates to those in search of pure-bred stock for breeding purposes. The pure-bred breeders in this province are situated far apart, long distances frequently intervening between the would-be buyer and the seller. The party contemplating purchasing naturally hesitates before paying what he considers a good price for an animal that he has never seen and knows nothing of, further than the description given by an interested party that he has probably never seen. It is not surprising that he finally decides to continue the use of his scrub bull for another season.

In addition to this, our ideas of what constitutes a good animal differ greatly. The man that does not appreciate the necessity of making his own selection is not likely to make much of a success in the stock business. This request for the free transportation of pure-bred stock for breeding purposes, and free passage or greatly reduced rates under restrictions to those in search of breeding stock, if granted would very speedily result in the marked improvement of the cattle of this country.

The owners of pure-bred herds of cattle in Western Canada find the present situation extremely discouraging. I think I am quite safe in saying that there is no place in the world to-day where pure-bred

cattle of good quality and breeding can be purchased as cheaply as right here in the West. The breeders along the southern portion of the province have been of late looking across the line for purchasers for their surplus stock, and already report a number of very satisfactory sales. Doubtless a little advertising in American stock journals would lead to a large business being done with our neighbors. However, this is attended with considerable difficulty, such as the registering of the animals sold in the American Herd Book, which, under certain circumstances, proves very expensive. It also involves the necessity of the tuberculin test. I think most of the breeders will agree with me that a good business on our own market would be more satisfactory, and also that it would be a great loss to have any considerable number of our best animals shipped out of the country. It is, therefore, to be hoped that anything that is to be done in the way of free distribution should be made known at once, in order that business should once more assume its normal condition.

DISCUSSION.

The discussion which followed this admirable paper was perhaps the most interesting of any during the week. Mr. Hodson said it was the best paper he had ever heard on the subject, and showed that the writer had spent a lot of time and hard thought on the matter.

L. A. Hamilton, F. T. Griffin and G. H. Shaw, representing the C.P.R., were present, and answered many questions. The discussion brought out the fact that quite a few of those present were in ignorance of the rules about shipping stock, or did not read the literature sent them, and that some of the station agents were in the same position. Mr. Shaw answered many questions, and explained some points misunderstood. The result will be a much better understanding.

Deputations from the associations will again wait upon the railway companies, and the express companies as well.

L. A. Hamilton explained that the distribution of free sires was started because

of the superior class of fat cattle coming from the M. & N.W. lines being traced to the influence of good sires from the Bin-scarth Stock Farm. No man was more interested in Manitoba than the president of the C.P.R., and he wanted all the stock coming from the C. P. R. lines to be as good as that which came down the M. & N.W. Hence the distribution of free sires. The company did not want to do anything to antagonize the breeders or farmers of the West. This move had been made with the very best of motives, but owing to the opposition it had aroused, they had decided to discontinue it after the present lot of 80 bulls and 80 boars was purchased. A large proportion of these will be purchased in Manitoba, and he wished the associations would appoint a committee to work with them in the purchase of these sires. He also explained that the company had been told that there were no bulls for sale in Manitoba last fall, or they would not have purchased all the stock in Ontario. They had been told that if Manitoba were scratched with a fine-tooth comb, a dozen bulls could not be secured.

They had been blamed for keeping this last lot hanging on so long, but the reason was they wanted to meet the breeders in convention and discuss this matter with them. They would be purchased now as quickly as possible. The distribution will not be confined to Manitoba, but some of them will go to the Territories.

He was surprised to find so many breeders ignorant of the rules about shipping stock, and strongly advised them to read and study the rules. If there were any disagreements with the company, the best plan was to come to the company and talk over the trouble. The C.P.R. interests are the interests of the country.

Mr. Shaw said that in cases where the station agent did not know the rules, or there was any dispute, the best plan was to pay what the agent asked, take a receipt from him, then explain the matter to the secretary of the Association, who would lay the matter before him, and he promised to settle any such trouble inside of 48 hours.



F. W. Brown,
Portage la Prairie.



Jas. Gorrell,
Pilot Mound.



John Oughton,
Middlechurch.



Wm. Ryan,
Ninga.



Jas. Yule,
Crystal City.

Some of the Stockmen in attendance at the Conventions.

BOLE'S CONDITION POWDER

In 1 lb. packages, 25 cents per package.

Mr. Hodson said that was the way difficulties were settled in Ontario, and the plan gave every satisfaction.

Mr. Graham asked if it was not true that on account of the opposition roused against free sires, the company had not spent as much as they intended to do in this way.

Mr. Hamilton admitted it was.

Then Mr. Graham urged that the balance of what they had thought of spending be used, under proper restrictions, in assisting buyers to select bulls.

The result of the discussion of this question was one of the best features of the meeting, and every one went home convinced that better rates and a better understanding with the company would be forthcoming.

Following this discussion was a talk by Jos. Yuill, Carleton Place, Ont., on

THE POINTS OF A DAIRY COW.

By means of a diagram he illustrated the type of cow that is best adapted to dairy purposes. She may be of any breed or grade, but if she is a real and persistent milker she will always be of that type, or very near it. She will be wedge shape, tapering from heavy hind quarters to a light front, both broad and deep at the point where the milking functions are most in evidence. There is a very real relation between type and performance. The stomach is the machine in which the food is to be put through the preliminary process of digestion; it is adapted to the digestion of bulky food, and to accommodate and support it the three furthest back ribs should be long, broad, sloping backward, and have a free space between them. The loin broad and strong. Lung power is also valuable, and the cow, though narrow at the shoulder, must be wide between the front legs. The backbone should stand well up, and the whole system full of nervous energy. The head should be rather long, broad at the eyes, rather dish-faced than otherwise, and the eye bright and standing well out, yet with a placid expression. The mouth and nostrils should both be large. The horn, of the Ayrshire more particularly, looks rather strong and coarse. This is partly in evidence of good vital force, partly due to the use of skim-milk in feeding.

In answer to a question, Mr. Yuill said dehorning was perhaps useful in an ordinary cow, but it spoiled the look of a pure-bred.

The udder should reach well forward and be carried well up behind. Different forms of escutcheon, and their relation to the performance of the cow were discussed. It is best for the performance of the heifer that she be brought early into milk, and by means of very succulent feed kept at work as long as possible, so as to develop and fix the milking habit. The dairy cow is very largely an artificial product, and in proportion to the skill with which she is managed will be the profit from keeping her. She should be milked ten months in the year, and never allowed to run down. Milking before calving may be necessary for a cow with strongly developed milking habit. Distention and an inflamed condition of the udder are partly to be kept down by a good dose of salts, partly by milking. The tendency to milk-fever is greatest when the cow is at her prime, and most dangerous in the best performers.

CEMENT FLOORS.

John Renton, Deloraine, gave an interesting practical talk on his successful work in laying a concrete floor in his horse stable. He had been promised assistance in laying this floor by an employee of the cement manufacturer, but owing to delay and misunderstanding, the councillor only came to hand after Mr. Renton had himself done the work. He had paved the bottom roughly with boulders, as large as well-grown cabbages, then laid the feed passage in concrete, next the stalls, and after that the passage way along the centre. The horses' heads were toward the walls on each side. Mr. Renton's methods were not all such as a more practiced hand would have followed, but all he did was well done. The passage has a slight rise in the centre, which keeps all water in the gutters. The back end of the stall is raised above the gutter a little, and bevelled off. In his own way, Mr. Renton has turned out a floor so well planned and durable that any tradesman might have credit by the job.

His description of the work and the way it was done proved highly interesting to all who heard it.

BREEDING FOR A PURPOSE.

Jas. Glennie, Longburn, gave an original talk on breeding for dairy purposes. The general-purpose cow is, in his opinion, very much a myth, and when you have found one that appears to fill the bill, she traces back to some sire and dam of manifest dairy type. It is easy for a state experiment station to collect cows from a whole state that appear to justify the plea for a dual-purpose cow. His cows are bred for the single purpose of making milk and cream, and do it. We hope to give Mr. Glennie's paper at some future opportunity.

SANDY BAY STOCK FARM. HACKNEYS



Rosseau Performer (5391 E.H.S.B.).

We have on hand several Hackney Stallions, both imported and Canadian-bred, all of the best strains, and all prize-winners at our best shows. Entire horses will soon have their routes laid out, and owners cannot afford to disappoint their patrons. Apply now and get reasonable quotations. Send for catalogue and particulars to—

HORACE N. CROSSLEY,
Present address, 91 Woodlawn Av., Toronto, Ont.

2 Shorthorn Bulls

For sale, aged 8 months and 4 years. The latter was bred by Jos. Lawrence & Sons, and is a sure stock-getter; was a winner in '86 and '87 at Winnipeg Industrial. Also one Standard-bred Stallion, "Volunteer Clay," registered. Address—

R. P. ROSS, Turtle Mountain, Man.

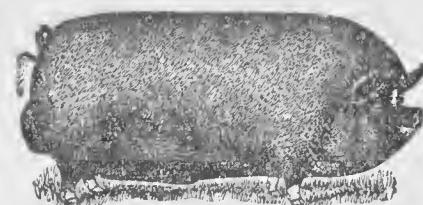
A capital tonic, diuretic and vermifuge

For Horses, Cattle, Sheep and Hogs.

The best spring medicine made for horses

SWEEPSTAKES HERD OF LARGE ENGLISH

BERKSHIRES



At Winnipeg Industrial, 1889. Herd headed by three first-class boars—Perfection (4760), Proud Victor (4601) and Prince (4680). A few sows fit to breed; also some choice September pigs, both sex, for sale. I am also booking orders for spring pigs from the best lot of sows I ever had at one time. Pairs supplied not akin. Correspondence solicited.

R. MCKENZIE, - High Bluff, Man.

Don't Sell Your Young Stock

We are prepared to advance money to good farmers and small ranchmen to carry their young stock to maturity and to purchase store stock for fattening, at moderate rates.

HASLAM & WRIGHT,

Private Bankers,

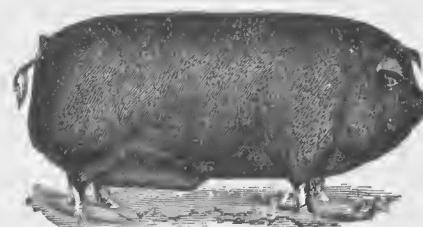
Forum Block,

WINNIPEG.

W. L. TRANN, CRYSTAL CITY, MAN.

Proprietor of Boundary Herd of

POLAND CHINA SWINE



Our herd are direct descendants of such noted hogs as Canada Wilkes, Guy Wilkes 2nd, M. P. Sanderson, and the Tecumsehs. Nothing but first-class stock shipped. Write for what you want; satisfaction guaranteed. Prices always reasonable. Nothing but choice sows kept for breeders. We are now booking orders for spring pigs of 1900. We have a few good winter pigs for sale. Write and describe what you want, and we will endeavor to treat you as we would wish to be treated.

GOLD STANDARD HERD OF REGISTERED BERKSHIRES.



I am now booking orders for spring pigs, bred from large mature stock, and sired by boars weighing from 500 to 800 lbs., sows from 400 to 750 lbs. No better Berkshire blood on the continent, combining large size, easy feeders, beautiful heads, perfect markings, deep-sided bacon type. Unrelated pairs or single litters of either sex supplied. Orders solicited.

Address— J. A. MCGILL, Neepawa, Man.

Shorthorns

Choice young bulls at right prices. D. Hysop & Son, Box 492, Killarney, Man.

Sheep and Swine Breeders' Convention.

The annual meeting was held on Wednesday, the 21st of February, in Winnipeg. In the absence of the president, A. Graham presided, and opened the meeting with a few words of welcome. The minutes of last meeting were read and approved. Reports were received from representatives to the various fair boards.

The financial statement showed a very satisfactory state of affairs, there being a balance on hand of \$168.70. A circular letter sent out by the secretary at the time the C. P. R. started the free distribution of pure bred sires, showed from some 35 replies that were received that there was something like 190 boars, all ages, for sale at the time.

OFFICERS AND DIRECTORS.

President, A. Graham, Pomeroy; first vice-president, W. Kitson, Burnside; second vice-pres., J. A. McGill, Neepawa; sec-treas., Geo. Harcourt, Winnipeg.

Directors—Sheep: Wm. Wallace, Niverville; J. Jickling, Carman; J. Renton, Deloraine; J. Oughton. Swine: F. W. Brown, Portage la Prairie; Jas. Bray,

quality, yet the drovers invariably buy by the lot from the farmer. In fact the culling had not gone far enough back. It would be much better if the drovers would pay for hogs in the farmer's yards according to grade, giving the farmers the exact worth of each animal. This would have a good educational effect.

Mr. Hodson said that in Denmark hogs were paid for according to quality, which was judged after the hogs were hung up in the packing house. Thus the full educational effect was felt. He suggested that where possible a number of farmer should combine and ship their hogs to the packing house, follow the pigs through the yard, then view the carcasses after they were killed and hung up. Farmers were doing this in Ontario and the lessons learned were most valuable in pointing out the right kind of hog to raise for the packer. It was also pointed out that the supply of hogs in Manitoba was so limited that the packers were glad to get any kind of a hog and were consequently not grading as closely as they would if the supply of hogs were more plentiful. Far-

mer. Hudson then read a list of questions sent out by him to the packing houses in Ontario, and gave extracts from the answers to show just what kind of a hog was wanted.

The next paper was by Prof. Grisdale, Agriculturist of the Dominion Experimental Farms, on "Swine Feeding," which space will not permit us to give in this issue.

A perfect shower of questions was thrown at the speaker when he was through. In reply to a question, he said that exercise could be given the breeding sows in the barn yard, even when 40 below zero, by having them sheltered from the wind. In regard to pigs tramping down rape and fouling it, he said he had no trouble with either. He found it wise to supplement grass with grain and always fed some grain with rape.

Question.—Have you any comparison of the results of feeding on Bromus pasture and rape?

Answer.—No. But the results of feeding on Bromus would be very similar to that of Blue grass, which was good. In the United States an acre of Blue grass was found to be worth \$40 a season as pasture for hogs.

Question.—Are sugar beets valuable as feed, and would they take the place of grass?

Answer.—Yes, they are beneficial, and especially valuable for winter feeding. We



K. McIvor,
Virden.



John S. Robson,
Manitou.



J. A. McKellar,
Brandon.



Wm. Chalmers,
Hayfield.



Jos. Lawrence,
Clearwater.

Some of the Stockmen in attendance at the Conventions.

Longburn; J. Yule, Crystal City; W. E. Baldwin, Manitou. Auditor, G. H. Greig.

Representatives to Fair Boards: Winnipeg, W. S. Lister; Brandon, H. Nichol; Portage la Prairie, Jas. Bray; Carberry, J. G. Barron; Carman, Jas. Riddell, M. P.P.; Rosebank; Manitou, W. E. Baldwin; Morden, E. Leatherdale; Neepawa, H. R. Keyes; Rockwood, Jacob Scott; Springfield, A. Baxter; Kildonan, J. Oughton; Woodlands, W. M. Champion; Crystal City, Jas. Yule.

The executive were appointed a committee to wait upon the government about an increased grant for the association.

PRACTICAL DEMONSTRATION.

At the afternoon session four sides of as many different kinds of hogs were on the table for inspection and C. H. Johnston, foreman of the J. Y. Griffin Co.'s packing house, gave a practical talk on the right kind of a hog for the packer. One side he showed was from a pig that was too thin and soft and when cooked would give most unsatisfactory results. The pig had not been fed long enough. Another side was a typical one, with about the right amount of lean and fat, and of fine flesh. Another was altogether too fat and a third, while having the right proportion of lean and fat, was too soft. At the close of his address quite a discussion arose about the packers paying for their pigs according to grade. The discussion brought out the fact that while the packers cull and pay the drovers according to

mers are thus missing a good lesson and are being led to think that the packers will take anything that offers. This is a serious mistake and many a man will have work to undo in after years on account of it.

REQUIREMENTS OF THE BACON TRADE.

This was the subject of an interesting and most instructive address by F. W. Hodson, Live Stock Commissioner for the Dominion. Space will not permit of this paper being given in this issue, but we hope to give it at some future time. In opening Mr. Hodson said that the packers' and the farmers' interests were identical.

A most interesting discussion followed this address. It was asked if pigs fed on grass made good pork. The answer was that it was possible to feed any kind of feed if fed judiciously. It was possible to spoil good pigs by bad food, but it was impossible to make bad pigs into good ones.

Question.—Is it advisable to start judging at the fairs on the basis of utility rather than for fat?

Answer.—Certainly.

Question.—Is it not possible to go too far with this call for lean bacon?

Answer.—The packers want lean hogs, but nothing but a strong constitutioned pig will give the class of hog wanted. Sickly, weakly pigs are a fruitful source of soft bacon.

have found lucerne and brome hay a valuable addition when mixed with the feed in winter.

Question.—Do you think it is necessary to give fattening hogs exercise?

Answer.—I am inclined to give some exercise.

Question.—What do you consider skim-milk is worth?

Answer.—Experiments show that in comparison with other feeds, it is worth 20 cents a cwt., and that the greatest value is obtained when fed in small quantities.

Professor Henry.—I hope that this point won't be lost, because it is a most valuable one. Farmers often think that because they have only a little milk to feed, it is not worth bothering about—that it don't pay to feed it, because it can't do much. They make a great mistake. It is when fed in small quantities that skim-milk is most valuable. Study the results as given in Professor Grisdale's tables, and see that when only two pounds of skim-milk a day was fed, 1.83 lbs. of it was equal to a pound of corn in laying on flesh, and that when three pounds was fed, 3.23 lbs. of it was equal to one pound of mixed grain. This is most valuable information, and you farmers should take note of it.

Question.—What is the effect of cooking feeds?

Answer.—The effect is to lessen the value of all feeds, with, perhaps, the one exception of potatoes; these we find are

better cooked, and are of considerable value.

Professor Henry suggested that brood sows could be given a certain amount of exercise by feeding them whole roots, in that they would have to stand to eat them.

DRY VS. WET FEED.

This question was thoroughly threshed out. Professor Grisdale said that they had found the best results from feeding grain dry. He thought that this might be due to more thorough chewing of the food.

Professor Henry said that when he first started out to experiment with pigs, he came to the conclusion that feeding dry was the best; but when thoroughly tested later he found that feeding the grain wet gave the best returns. He thought that perhaps in a cold climate like this dry feeding would be the best.

Dr. Thompson thought that if the pens were warm, wet food could be given, but if they were cold, then it would be advisable to feed the grain dry.

Shorts and sifted oats were recommended as good substitutes for skim-milk. Professor Henry spoke very strongly in favor of sifted oats. The little fellows cannot make use of the hulls, but in the sifted oats they had the very best of feed for young growing pigs. He also recommended finely ground wheat. The sifted hulls can be fed to the cattle.

HOG PASTURE.

An interesting discussion took place on this subject, and it was an important one for the Manitoba farmer. The rape plant was highly spoken of as a green food for hogs. Mr. Kitson had tried it, but found the plant would not stand up.

Mr. Hodson recommended tares. He had had good success with them, turning the young pigs in when the tares were about six inches high.

Professor Grisdale had pastured hogs on peas and oats; they did well and liked it.

Mention was also made of Mr. Ray's work at Newdale in pasturing on wheat.

Mr. Champion found good results from pasturing on a mixture of wheat, oats and barley. The hogs ate all three, and he thought there could be nothing better.

Professor Henry called attention to the fact that wheat, oats, barley, etc., were grasses, and when eaten off green would give just as good results as pasture would. He said we must grow some hogs, and pasture of some kind was an important element in successful hog raising.

SWINE BREEDING.

This was the subject of talk by Jos. Yuill, of Carleton Place, Ont. He called attention to the change in the type of hog now wanted, and also to the change that had been made in the type of Berkshire in response to the demand for the bacon hog. The first essential to success was to select a proper sow. Once she was obtained, she should be retained as long as possible. She should have a somewhat narrow back, deep, smooth side, and straight underline. She should raise two litters a year, in March and August. Her pen should be bedded with cut straw, and a plank 12 inches wide or a pole put around the outside about 8 inches from the floor to prevent the sow lying on the young pigs. She should have a sloppy diet, and be brought gradually to full feed. When the pigs are about four weeks' old, and even before, make a small pen for them where they can get at extra feed. A nine-quart basin, nailed down on a piece of 2-inch plank, 1 foot wide and 4 feet long, makes a suitable feed dish, as they cannot upset it. Put fresh milk in this dish, a little at a time, and keep it fresh.

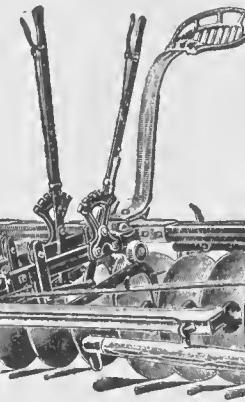
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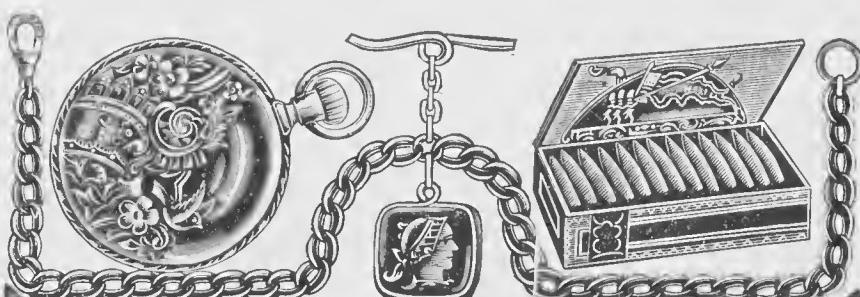
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Morden.



Walter James,
Rosser.



Wm. Lothian,
Pipestone.



H. R. Keyes,
Midway.



W. E. Baldwin,
Manitou.

Some of the Stockmen in attendance at the Conventions.

Mr. Yuill allows his pigs to suckle until about eight weeks old, when they will have about weaned themselves, and the final process can be accomplished by shutting them away from their dam a few times at night at first, and then altogether.

He has found a feed composed of four parts of oats, two of peas and one of barley, all ground fine, very good food for making young pigs grow rapidly. Sometimes he adds shorts, and in summer a run on grass is given. While on grass, grain is always fed once a day, and if not on grass it is fed three times a day. After the fall litter is weaned, they get a liberal supply of mangels, and this is continued through the winter with what milk there is to spare, and the mixed grain mentioned above.

In conclusion, he gave the following scale of points for judging bacon hogs. It was proposed by Professor Day, and adopted by the Dominion Swine Breeders' Association as a correct standard for judging pigs of a bacon type:

**SCALE OF POINTS FOR HOGS
OF BACON TYPE.**

Description.	Points.
Head and Neck:	
Snout—moderately fine	1
Eyes—good size, full and bright . . .	1
Jowl—light and neat	3
Neck—medium length and rather light, with no tendency to arch on top	3
Forequarters:	
Shoulders—light, smooth, rounded from side to side over top and very compact, no wider than back	9
Breast—good width and full	4
Fore Legs—set well apart, medium length and straight; pasterns, upright; bone, flat; clean and moderately fine..	4
Body:	
Back—medium width, rising slightly above the straight line, and forming a very slight arch from neck to tail	9
Loin—strong and full but not	

unduly arched, wide as rest of back 5
Ribs—good length and moderately arched 3
Side—fairly deep; long, smooth and straight between shoulder and ham; a straight-edge laid over the shoulder-point and ham should touch the side throughout 12
Heart Girth—full but not flabby at fore-flanks, frilled out even with the side of the shoulder; there should be no tucked-up appearance back of fore legs nor drop back of shoulder top 5
Flank—full and low 1
Underline—straight; the belly should be markedly trim and neat 5

Hindquarters:

Rump—same width as back, long and slightly rounded from side to side over top 5
Ham—full without flabbiness, thigh tapering towards hock without wrinkles or folds, and carrying flesh well down towards hock 6
Hind Legs—medium length; hocks set well apart but not bowed outward; bone, flat, clean and moderately fine; pasterns, strong 4

Quality:

(1) Ear, rather thin; (2) hair fine and abundant; (3) bone, flat and clean in legs, moderately fine in snout and head, and showing no prominence on side and top of shoulder; (4) skin, smooth, showing no tendency to wrinkle; (5) flesh, firm and smooth, with no flabbiness at jowl, fore-flank, belly or ham. 15

Style:

Active and sprightly in movement, walking without a swaying motion, and standing well up on toes 5

N.B.—For hogs intended for killing, the same scale of points may be used, with the following modifications: Strike out score for eyes, ears, hair and style, deduct two points from points allowed fore-legs and also hind-legs, and add following score:

Weight, 175 to 220 lbs. live weight. Being under 160 lbs. or over 220 lbs. will disqualify. . . . 13

A lively discussion followed this paper, and at the close of it Jas. Bray, Longburn, read a paper on "Swine Breeding and Feeding for Profit on a Wheat Farm," which was partially given in our columns some time ago. This brought to a close one of the best meetings of the Association.

Joint Meeting of the Cattle, Sheep and Swine Breeders' and the Dairy Associations.

The council chamber was crowded on the evening of Feb. 21st at the joint meeting. Andrew Graham, President of the Sheep and Swine Breeders' Association, occupied the chair.

Mayor Wilson extended a welcome to the members present, and it was replied to by the Hon. Thos. Greenway, who made an excellent speech. He referred with pleasure to the rapid growth in the amount of wheat exported by Manitoba, but regretted that he could not say as much for the increase in the dairy business and the live stock industry. It was a satisfaction to note, however, that there were fewer stockers sent to the U.S. last year than the year before. In 1898 there were about 20,000 stockers sent to the U.S. Our own men then took up the work, and last year 20,000 head were sent to the Territories and only 10,000 to the U.S. He thought the great waste of Manitoba was burning the straw in the fall. This he deprecated. In closing, he said he had been called the farmer premier; now his ambition was to be the premier farmer.



R. I. Crisp,
Souris.



E. A. Struthers,
Russell.



W. M. Champion,
Reaburn.



D. McCuaig,
Macdonald.



D. Jackson,
Newdale.

Some of the Dairymen in attendance at the Conventions.

C. W. Peterson, Deputy Commissioner of Agriculture for the Territories, was the next speaker. He was sorry there were not more breeders present from the Territories to take advantage of all the good things that were to be heard, as well as the equally important advantage of men rubbing up against each other. The cattle industry was now enjoying more prosperous conditions than for some years, and he hoped to see the 10,000 stockers that went to the U.S. last year all go to the Western ranges this season. There was room for them. He thought it a good idea for Manitoba farmers to raise stockers for the Territories. The successful wintering of the calf was the most difficult problem on the range. This could be overcome by the Manitoba farmer growing the calf, and shipping the yearling to the range to finish its growth on cheap pasture and easily put-up winter feed. The herds of cows in Manitoba could be increased, and a good business developed. As in Manitoba, dairying had not been as prosperous as he would like to see it. Ranchers didn't like to milk, and he hoped that the milking machine would be so perfected that it could be used successfully. One of the great wants of the West is a good coyote-proof fence for sheep, which would greatly help the sheep industry. The swine industry was growing, and he hoped that the Government would be able to improve the conditions, and that soon no Ontario hogs would need to be brought in. They had a good market in the mining regions to the west of them.

NEW MINISTER OF AGRICULTURE.

The new Minister of Agriculture for Manitoba, the Hon. J. A. Davidson, expressed himself as pleased to attend such a gathering of stockmen and agriculturists. He was pleased to learn of the interest taken in stock-raising, and he hoped Manitoba farmers would strive to be known for the superior quality of their stock as well as their wheat. It was a mistake not to engage in mixed farming, and he hoped the efforts of the associations in helping forward the good work would be successful. The Government, which he represented, appreciated the importance of the good work done by the associations, and would do as much as its predecessors had done to assist the associations, and more if it were possible.

Professor Henry, Dean of the College of Agriculture at Madison, Wisconsin, was the next speaker. His address was a good one, and was listened to with great interest. He is a pleasing speaker, and quite captivated his audience. He felt that in attending this meeting he was getting more than he was giving. He complimented the Canadian Government on the systematic way it was going about the work of improving its agricultural conditions. His subject was a broad one, and a hard one to handle, but he wished to familiarize Manitobans with what was being done in the U.S. for agriculture, and point out, from the success that had attended this work, lessons for Manitoba.

AGRICULTURAL EDUCATION.

It is sometimes well, in these matter-of-fact times, to go back to the foundation of things, in order to have a proper conception of the causes for what may now be taking place. It is eminently proper that American farmers should have a clear understanding of how our American agricultural colleges originated, who were their founders, and what are their purposes.

A bill was introduced into our National Congress in 1858 by representative Justin F. Morrill, of Vermont (afterwards Senator), providing for the establishment of an

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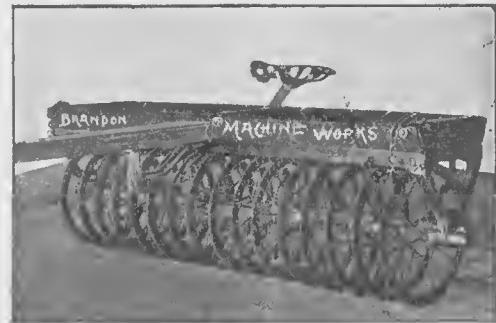
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agricultural college in each State of the Union. Passing both bodies by a good majority, the bill was vetoed by James Buchanan. On April 30th, 1858, representative Morrill delivered an address before the House of Representatives, which is a classic of its kind, and which has been unequalled as a plea for the education of the children of the industrial class of our country, especially farmers' sons. In this address he points out how agriculture is the basis of national prosperity. He quotes Adam Smith as saying "That which arises from the more solid importance of agriculture is much more durable and cannot be destroyed but by those more violent convulsions occasioned by the deprivations of hostile and barbarous nations continued for a century or two together." He showed that "national wealth is greatly increased or diminished by the more or less skill, dexterity and judgment with which labor is generally applied." Congressman Morrill pointed out that European nations were already awakened to the importance of agricultural education, and were providing schools and experiment stations for the advancement of this great art. He showed that our system of farm practice was faulty and ultimately disastrous, because each year saw the fields poorer in fertility than before, the crops gradually diminishing in quantity and quality. He showed that our farmers were not indifferent to these conditions, but

"Something to obtain higher prices for all sorts of agricultural products."

Washington must have had something akin to our agricultural colleges in mind when he wrote in his last message, "It will not be doubted that, with reference either to individual or national welfare, agriculture is of primary importance. In proportion as nations advance in population and other constituents of maturity, this task becomes more apparent, and renders the cultivation of the soil more and more an object of public patronage. Institutions for promoting it grow up supported by the public purse; and to what object can it be dedicated with greater propriety?"

But James Buchanan turned a deaf ear to the pleading of the people, and it was left for Congress to consider the subject once more, and for that patriot, Abraham Lincoln, whose heart was always in accord with the hopes and aspirations of the common people, to sign the bill which gave away 11,000,000 acres of the public domain for the education of the children of the industrial classes. The Agricultural College Land Grant bill was signed by Lincoln July 2nd, 1862, at a time when the United States were in the throes of an awful civil war.

By this grant there was given to each State in the Union 30,000 acres of land for each Representative it then had in Congress. It was specified that the in

the further appropriation of \$15,000 for experiment purposes, constitute the Government gift to each State in the Union for the benefit of the colleges of agriculture and the mechanic arts, and for investigation. In many instances this Government aid is supplemented by State appropriations. For example, in the State which I represent, the agricultural college receives from the commonwealth \$35,000 annually for instruction and experimentation. Michigan has given her agricultural college over \$1,000,000 in all since its foundation, in addition to the Government appropriation. The manner of disposition of the original Government land appropriation was quite diverse for the different States. Connecticut, for example, turned this gift over to Yale College; Massachusetts founded a distinctly agricultural college at Amherst, giving it two-thirds of the grant, and turning over the other third to the Boston Institute of Technology. New Hampshire gave her grant to Dartmouth College. New York's gift of 990,000 acres (the largest of all) went to Cornell University, where it was splendidly conserved through the wonderful foresight of that able and generous benefactor Ezra Cornell. In most instances a goodly part of the money went to the enlargement of the scientific courses, and sometimes even to the further promulgation of the classics. In many institutions the mechanic arts department came rapidly into



C. Marker,
Calgary.



Jos. Yuill,
Carleton Place, Ont.



C. C. Murray,
Winnipeg.



Mrs. Jos. Yuill,
Carleton Place, Ont.



J. W. Mitchell,
Regina.

Some of the Speakers at the Conventions.

were groping in the dark for help, while only meagre or desultory assistance was rendered them. There was some help from agricultural papers, and the annual fairs of the agricultural societies, but nowhere were there laboratories and schools for exact investigation and competent instruction.

Closing his plea, which was one of the most eloquent ever delivered in the halls of Congress, he said: "Pass this measure and we shall have done—

"Something to enable the farmer to raise two blades of grass instead of one;

"Something for every owner of land;

"Something for all who desire to own land;

"Something for cheap scientific education;

"Something to induce the farmers' sons and daughters to settle and cluster around the old homestead;

"Something for peace, good order and the better support of Christian churches and common schools;

"Something to enable sterile railroads to pay dividends;

"Something to enable the people to bear the enormous expenditures of the national government;

"Something to prevent the dispersion of our population, and to concentrate it around the best lands of our country; places hallowed by church spires and mellowed by all the influences of time—where the consumer will be placed at the door of the producer, and thereby

come from the sale of all such land should constitute a fund, the interest of which should be forever used to maintain at least one college where the leading object should be the education of the children of the industrial classes. This was the grandest gift ever made for education.

Because of the immense bodies of land thrown upon the market through the Homestead Act, the grants to railroads, and the Agricultural College Land Grant before referred to, and because of lack of proper foresight and business judgment, many of the agricultural colleges derive but a small income from the original land grant. Believing that the errors of a few who had handled this trust should not be visited upon the young of our country seeking education, Senator Morrill introduced a supplementary bill increasing the income of the agricultural colleges, the bill passing August 30th, 1890. By this second Act, money derived from the sale of public lands to the amount of \$15,000 was appropriated to each State, this sum to be increased by \$1,000 annually until it should aggregate \$25,000, at which sum the annual appropriation should stand.

In 1887 Congress passed what is known as the Hatch Act, giving \$15,000 annually to each State in the Union for the establishment of an experiment station.

The income arising from the sale of lands granted in 1862, the annual appropriation of the United States (which amounts to \$25,000 for each State the present year and will so continue yearly), and

existence, and accomplished untold good. I ascribe the marvellous advancement our States have made in engineering and mechanical arts directly to these schools; they have turned out thousands of young men trained in the sciences and in the handling of machinery; they have paid for themselves a hundred-fold. In practically all cases agriculture direct received less assistance and gained far less from this great grant than the friends of the measure had anticipated. It was found very easy to push the other sides of the institution, and very difficult to advance the agricultural department. All of this is not difficult to understand now that the efforts of earlier years are matters of history. Who in those years was able to tell what an agricultural college should be, and how it should be managed? Scarcely was there a person in the country who could lay out any definite plan of procedure. The wildest theories prevailed, ranging from those born in classical minds—which would have the every-day farmer a classically-educated gentleman—down to the so-called practical man—who wished the students to wear a peculiar garb and to do the most menial labor, in the belief that by keeping the student close to the soil he would never lose his love for farming. The farmers were generally indifferent to the matter, for they had no theories to apply, and sometimes preferred to criticise rather than assist; and so it was left to college trustees and college presidents to do as best they could.

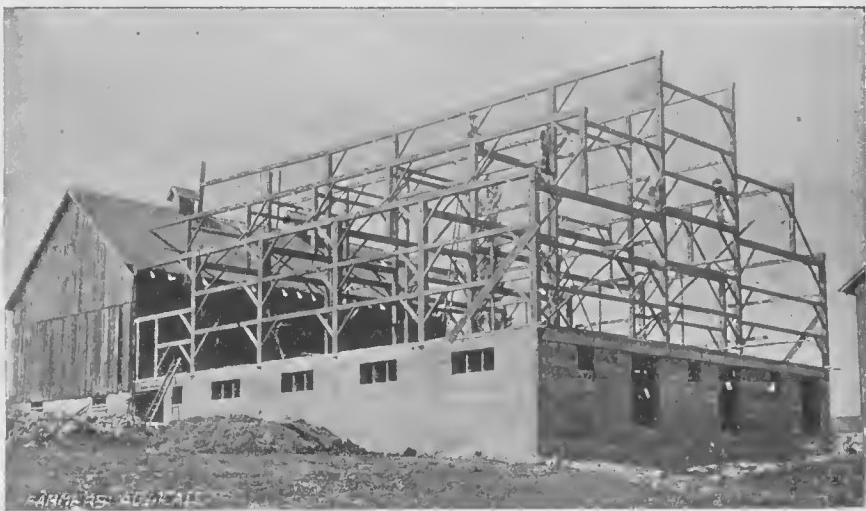
As the years rolled on, it was found that few students were pursuing agricultural studies at the several institutions, and then arose a clamor among the farmers for a change. The National Grange took up the matter, and urged the separation of the colleges where they were departments of universities, urging that young farmers would not attend these institutions along with students pursuing other courses, and that agricultural colleges could only be a success when established on a separate foundation. They pointed to the great success of the Michigan Agricultural College, and the good work of the Massachusetts Agricultural College, both of which were separate institutions, and to the attendance in some other institutions. In some cases institutions which bore the name of agricultural college, and carried a large number of pupils in their catalogue, were really not agricultural colleges at all, but schools of science and the mechanic arts, located in the country, affording a good education in the lines taught at a minimum cost to the pupils. That the farmers were thoroughly dissatisfied with existing conditions, and that they were powerful and successful in their efforts at separation, is shown by the fact that in New Hampshire the agricultural college was wrested from Dartmouth, and placed on a separate foundation at Durham. In Rhode Island the funds were taken away from Brown University, and given to an institution at Kingston. Up in the hills of Connecticut was a little agricultural school established on a farm through the benefaction of a New York merchant. To this school young men were going for education in farming, while Yale College, receiving the land grants, had practically no agricultural students. The farmers of the State, uniting as one man, pushed their efforts at separation, until the funds were taken from Yale and given to the Storrs' School at Mansfield. In several of the southern States separation has also taken place.

Let me return once more to those early days of experimentation in agricultural instruction. In some of the colleges there was not even a professor of agriculture to give instruction in that line; in others, matters were not much better, because upon a single professor were laid all the duties of instruction. There was no system of agricultural instruction which this teacher could follow; in other words, agriculture had not been put in "pedagogic form." There were books on agricultural chemistry, general works on farm practice, live stock, etc., but none of these were in form for class use. The few teachers who were really in earnest in those days were groping in the dark. Think for a moment of the tools they had to work with, compared with teachers in other lines! When a teacher is asked to give instruction in algebra or Latin, he can glance over the catalogues of publishers of educational works and note the names of dozens of books treating of his particular subject. As he approaches a decision in the matter, it is difficult to decide which of half a dozen text books to choose. This is because educators have been at work for generations upon Latin and algebra text books. In those days no one had taught the teachers of agriculture, and their efforts were but "the blind leading the blind." At these institutions those in authority, ignorant of what was required or of the possibilities, thought that one or two men could instruct in the whole field of agriculture, and for this cause matters were held back tenfold more than they should have been. Now we are learning to put men into each branch of agriculture, and as we divide up the work with bright men back of each line, we are rapidly building up our schools into centres of bona fide agricultural instruction.

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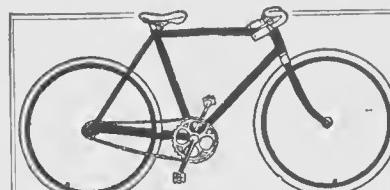
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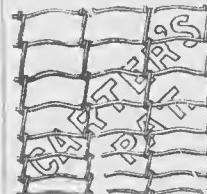
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They are no longer despised by our more progressive farmers, who now look to them with eager, anxious interest; they are beginning to have faith in them, and where once there was narrow suspicion and mild enmity, we now find an open-hearted and frank interest such as has been evinced at this meeting in your welcome to the professors, and such as is seen in a thousand ways throughout this Province as well as in my own country in reference to agricultural progress.

Your own country has been a leader from the start in agricultural education. Your school at Guelph has been an ideal institution in many particulars for American educators studying the subject, and has proved of untold worth to us in advancing our ideas along this unknown way. Your great system of experimentation, founded by the Central Government, with its headquarters at Ottawa, and its branches reaching to every part of your vast domain, has been a constant source of admiration to the people on our side. Your numerous dairy schools, and your system of travelling dairy instruction, together with the various other means of assistance to the people provided by the Government, have placed you far in advance of those on the other side of the border in many particulars. While the educational efforts on each side of the line are yet more or less imperfect, and everything is immature, your people are to be complimented in the highest terms

they must be fed and cared for day by day and kept ready for class work; and after two or three years their places must be taken by others.

In an agricultural college, where live-stock is used both for instruction and for experimentation, I do not believe that a minimum equipment can be secured for less than \$25,000; indeed your own agricultural college at Guelph received at one time an appropriation of \$25,000 for the purchase of stock, and the money was all expended, as some of you will recall, for the purchase of cattle and sheep. That expenditure was not too large, nor was it too much concentrated in the number of animals purchased.

At the Iowa Agricultural College, their cattle alone to-day represent a market value of probably \$20,000. As with cattle, so with plants in the greenhouses, with the objects on the farm, including machinery and other illustrative apparatus. More than all this, in many cases the students can receive but a small part of their instruction in lectures, but must be taught individually by expert instructors in many parts of their work. In teaching how to handle sheep, for example, each student's hands must be taken in the hands of the instructor and placed upon the sheep, so as to detect its strong and weak points. The lecture system will not apply to all in work like this, but instruction must be imparted to each member of the class individually. Instruction in the

manyfold, I will say to you that in my judgment a successful agricultural college and experiment station cannot be maintained in any western State short of an annual income of \$100,000, exclusive of all buildings and extraordinary expenses.

For a Province like your own, where there are probably less problems to be met, and where greater economies may be practiced, you could doubtless have a school of much merit with an annual appropriation of \$25,000. A great deal would depend upon how much was attempted, and how thoroughly the work was done. In my judgment these schools should be technical schools for instruction in agriculture, and not institutions where one can get general training in academic branches. Our young men can be taught arithmetic, physical geography, history, algebra, etc., far more cheaply and as successfully in the schools already established. Why should we duplicate these lines of instruction in a central school where the pupils must be housed at considerable expense to themselves or the Government which is educating them? Surely they would better be at home, so long as home schools can possibly afford general training. I am strongly in favor of making an agricultural college as technical and professional in its way as is a dental college, a medical school or a law school.

From all this you will see that agricultural education is very costly. Studying the problem as I have year after year, and



J. Bousfield,
Portage la Prairie.

Jas. Morrow,
Clearsprings.

Wm. Wagner,
Winnipeg.

G. St. C. McGregor,
Mekiwinn.

Wm. Ferguson,
Churchbridge.

Some of the Dairymen in attendance at the Conventions.

for the measures they have taken and the earnestness with which they have entered upon the solution of the great problem of how to lift agriculture to the highest plane of its possibilities.

Let me disabuse your minds on one subject which clings everywhere with that tenacity which so often characterizes misinformation and error. Agricultural instruction is the most expensive of all lines of educational effort. Because farmers live economically, and often endure privations, our people have come to think that agricultural colleges can be run far more cheaply than other branches of educational effort. The very reverse is the case. No other line of instruction will compare in cost with bona fide agricultural instruction. Let us compare instruction in animal husbandry with teaching Greek or mathematics. In the latter subjects, if the professor is given a comfortable room, with a few books, maps, blackboards, etc., he is equipped for thorough work. In addition to his salary there is the little expense for the janitor, fuel, etc., but it is exceedingly slight. What about live-stock instruction? First of all there must be the living animals with which to teach the students. If these are illustrative and typical, and in sufficient variety for the purpose, there is a heavy outlay—perhaps thousands of dollars before the first lecture and demonstration. These animals must be housed in expensive buildings;

sciences is far more expensive than instruction in mathematics or the classics, because of the large cost of the scientific apparatus required, the heavy expenses attendant on laboratory efforts, etc. Teaching students in the mechanic arts is likewise very expensive, because there must be lathes, tools, etc., for each student. Teaching agriculture is still more expensive



H. C. Whellams,
Fererton.

than any of these, because many of the objects, such as animals and plants, are expensive, short-lived, and need constant care and attention.

After twenty years of study, reflection and observation on this matter in my present position in Wisconsin, and after having seen the little income which my college possessed a score of years ago multiply

coming face to face with the difficulties which have confronted me one after another, I have made up my mind that there is no cheap road for us to follow in the States, and I doubt if there is a cheap one for your people on this side. I am sure if you cannot establish a school in some measure worthy of the great cost it represents, even though it be expensive, you will prefer not to undertake it at all. But sooner or later you will undertake it, and when you do, let it be headed in the right direction and started right, even though the beginning be humble.

And will it pay? Let us instance what has been accomplished through the intelligent direction of agricultural effort. Forty years ago Danish butter was about the poorest in all Europe. A generation ago the Danish Government undertook the improvement of Danish dairying in a systematic manner. A dairy school was opened, an experiment station founded, and in other ways this industry was encouraged. As the pupils began to pass out from the school into the creameries, agents were kept in England reporting each week to the Danish Government the conditions of the English butter market. From Birmingham, Liverpool, London and other cities, messages went back telling of how Danish butter stood in these great markets in comparison with butter from other countries—of its faults, with suggestions for improvement. This information was

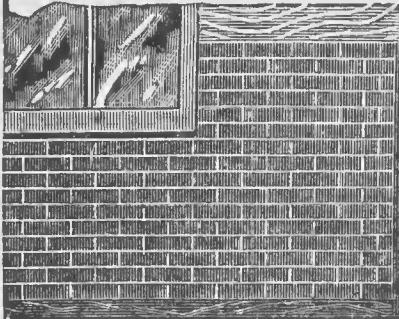
transmitted at once to the creameries, and efforts made to meet complaints and to raise the standard. All of these efforts cost money—a lot of it. What is the result of this consistent move toward improvement? Denmark is now selling England over \$20,000,000 worth of butter annually, and her total export out-put is worth about \$2,000,000 per month.

When Denmark had captured the British butter market, was she satisfied? Not at all. She next turned her attention to the pork trade. This country is sending abroad enormous quantities of pork products, but they are the lowest-priced goods sold anywhere. Denmark realized at once that she could not compete with the U.S. on low-priced goods. But there were high-priced goods in the English market. Irish bacon brought a much higher price than that from America. Could not Denmark make as good bacon as Ireland? Persons were sent to inspect market conditions and requirements, and to ascertain how the Irish put up their bacon, etc. The Danish experiment station was set to work on the problem of how to feed the pigs to make the best meat, and others took up the problem of the proper preparation of this flesh for the market. Tens of thousands of dollars were spent by the Government on this problem—enough money to have scared the farmers of some countries almost into rebellion. And what of the result? Denmark has captured the fine bacon trade of Great Britain, and is selling high-priced pork products there, while the U.S. is still furnishing the cheaper grades. Happily I can bring illustrations of how your own Government, through its fixed and travelling schools of dairying, through its General Department of Agriculture, through its subsidies to creameries, cold-storage houses, steamship companies, etc., in pushing the manufacture and sale of choice dairy products; how it is distancing our country in these matters; how, too, it is putting up fancy pork products, which enable the farmers to get higher prices for your hogs than do our farmers in the States by from 10 to 25 per cent.; but time forbids.

My friends, a new era is dawning upon us. Canada and the U.S. are progressing rapidly, located as they are side by side, though acknowledging different flags. Your progress, bright and shining as it is, has reflected light to our people, and has stimulated and helped us more than you can realize. If, in turn, a study of the agricultural system founded by our National Government is of help to you, we are only too glad that you may learn of the lessons it teaches. You are in advance of our people at some points of the line of progress, and we are watching most intently what you are accomplishing. Our schools are, in some points of agricultural instruction, ahead of what you have reached, and you are at liberty to gain what you may from these efforts. With a great region of prairie soil, rich in the fertility which the Almighty has been storing there through countless ages, with the wide world for your markets, with the tremendous impulse of national life behind you impelling you forward with an irresistible force, destiny has marked a happy future for you all. It is your opportunity and your inheritance to found here in this Northwest country an agricultural institution which shall be the pride of your people and the central source of light for your agricultural development. To it your sons and daughters will flock for the highest of instruction in relation to the soil which you turn with the plow, to the animals which your hands shall feed, and to the fruits of the fields and the trees which are yours for the gathering. In such a country as ours, whether on your side or the farther side of the line, there

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Can't be equalled as a durable, economical, practical covering for buildings



It gives Fire and Lightning proof protection—keeps out winter's cold and summer's heat—is uniformly handsome in appearance—can be most easily applied and costs very little.

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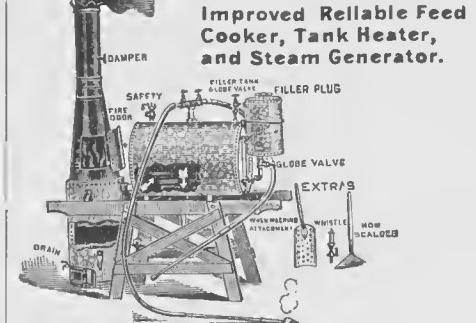
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My Patent Land Scrubber has been tested in all kinds of scrub during the past season throughout Manitoba and the Territories, as the unsolicited testimonials below will show.

These land scrubbers are made powerful enough to pull the heaviest scrub, and are guaranteed unbreakable, and will really last a lifetime.

One man with one team will remove as much scrub, root and branch, as five men will cut out, and will do it right.

No scrub plow needed after the scrubber has been used.

I am also building a power to operate the scrubber. One horse is all that is required, being equal to six with a six-inch roller, or by using a team and making the roller or shaft 12 inches in diameter, you will still have the same power, but will double the speed of the scrubber. The horse walks straight out, not in a circle. Every ten feet, six inches travelled by the horse draws the scrubber 18 or 36 inches forward, according to size of roller. Weight of power, about 400 pounds.

Correspondence solicited. All questions willingly answered.

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Cartwright, Man., May 3, 1899.
A. E. Brown, Esq.: Dear Sir.—Please send me another Scrubber. I have sold the one you sent me, and the man who got it says he would not be without one, as it is a great success. Yours truly, J. P. McKibbin.

Maple Creek, N.W.T., July 10th, 1899.
A. E. Brown, Esq.: Dear Sir.—Your Scrubber, as ordered by me, came to hand some time ago. I am well pleased with it. It is all that you claim for it. Yours truly, Chas. McCarthy.

Agricola P. O., South Edmonton,
May 20th, 1899.
A. E. Brown: Dear Sir.—Scrubber to hand O. K. I gave it a trial and am well pleased with the way it handles the scrub. The scrub here is very large. Yours truly, Chas. Armatage.

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is nothing impossible to a people who are single-minded as to the desired end. Your progress in educational matters has been marvellous, and great as it is, it is but the prophecy of what is to come.

THE PLACE OF WOMEN IN DAIRYING.

Mrs. Jos. Yuill's talk on this subject followed. She laid great stress on cleanliness in the dairy, and illustrated many things that would be changed if there was a woman in the dairy. She thought there would be an improvement for the better if there was a woman in every creamery and cheese factory in Canada, as they see what men cannot. In Denmark most of the work was done by women. She touched upon butter-milk, separating cream, the kind of salt to use in the dairy, and other topics.

RELATION OF DAIRYING TO AGRICULTURE.

C. A. Murray, Dairy Superintendent, was the speaker on this topic. We hope to give his paper in full at a later date.

Dr. Geo. Bryce strongly endorsed what had been said about agricultural education. He thought we should have an agricultural college here. This was a purely agricultural country, and a college was needed. If the farmers would take up this matter they would have one. All they had to do was to show the Government that they were in earnest, and wanted it, and they would get it. If the Government made the first move, and the farmers did not appreciate it, the college would go to the wall. Farmers must take up the subject and work it up through the institutes. It's going to come. It's got to come. Manitoba is to have an industrial school, but, beneficial as that is, an agricultural school is more important.

A vote of thanks was given to Professor Henry for his able address, and the meeting closed with "God save the Queen."

Joint Meeting of the Cattle, Sheep and Swine Breeders.

A joint meeting of the Cattle, Sheep and Swine Breeders was held Thursday evening. Mr. Steel, President of the Cattle Breeders' Association, was chairman. F. W. Hodson, Live Stock Commissioner for the Dominion, was the first speaker, and explained the nature of his position. He traced the history and development of the live-stock associations in Ontario, and showed how the success that had attended this development had led to his appointment, in order to work up the live-stock interests in a similar way in the Maritime Provinces and the West. Briefly put, his work is to try to improve the quality of our stock, improve the markets and the conditions of marketing, and foster the live-stock interests in every way he can.

He shortened his address in order to give the time to Professor Henry.

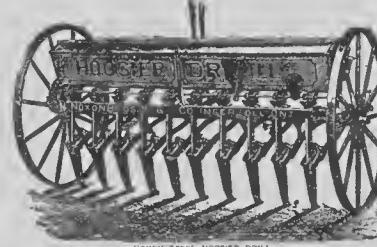
Professor Grisdale was the next speaker, and he too cut his address short so that the last speaker could have his full time. He emphasized the importance of feeding a succulent ration. This was well worth remembering the whole year round, but it was of special importance during the winter season. While ensilage was the succulent ration in many places, roots made a good substitute. Increasing the grain ration at this time of the year was not always the most successful way of making beef or milk; a little succulent food might make a larger gain at a much less expense. Roots can be produced here easily, and he urged that greater attention be given to them. He emphasized the necessity of feeding properly all animals on the farm. Where you put nothing in, you can ex-



NOXON NEW BUFFALO PATENT ALL STEEL DISC HARROW.



NOXON NO. 12 SECTIONAL SPRING TOOTH CULTIVATOR



NOXON STEEL HOOSIER DRILL.

THE UNIVERSAL FAVORITE,

Noxon Disc Harrow (OUT-THROW.)

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With reversible points, also thistle cutters if ordered.

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WHEN WRITING ADVERTISERS MENTION THE NOR'-WEST FARMER

pect nothing. Liberal feeding is the most profitable to follow, from the time the calf, pig or colt is dropped until it dies. Keep it up during the whole life of the animal, whether for beef, milk or work.

Professor Henry spoke next on

A LESSON IN FEEDING FARM ANIMALS:

A Proposed Line of Instruction for Rural Schools.

I ask the farmers gathered before me to-night to listen to the presentation of an elementary lesson in stock feeding. I shall present it in greatly condensed form for lack of time, as it seems to me it is possible for intelligent teachers in our rural schools to do when they shall have properly qualified themselves for such effort. I shall use a few comparatively new terms, but not many. Remember that in these days we are constantly finding it necessary to add to our vocabulary, and the farmer is no exception. There are new words for him to learn as well as for other people.

PROTEIN.

The nutritive portion of all substances which go to nourish man or beast may be grouped under five divisions, viz.: protein, carbohydrates, fat or ether extract, mineral matter and water.

We may consider the white of an egg or the cheese part of milk the best examples of protein. The gluten of flour and the lean part of meat are also protein substances. Oil meal, gluten meal, peas, bran and middlings are all rich in protein. Oats contain a fair quantity of protein, while Indian corn is relatively poor in that constituent. The stems of leguminous plants, such as clover, alfalfa, cow peas, the common field peas, etc., are quite rich in protein when cured into hay, while oat-straw, corn stover (shoeck corn from which the ears have been husked), are comparatively poor in protein. Instead of saying "protein substances," we frequently use the term "nitrogenous substances," to characterize this group of materials for the reason that they all contain nitrogen, an element not found in the groups of which I shall next speak.

The highest use of protein or the nitrogen substances, is to build up the muscles of the body and to replace their waste. The protein substances also constitute the organic part of the bones, most of the hide, hair, horns, nerves and blood of the body. The word "protein" means "first in importance," and we will readily agree that it was well named.

In its secondary use, protein is broken down in the body and furnishes heat and energy, or it may be converted into fat for storing in the tissues against a time of need.

CARBOHYDRATES.

Here is a long word, but let us learn to use it. Sugar is a pure, crystallized carbohydrate, and I am sure no one need ever forget the meaning of the word hereafter. Starch is another carbohydrate, as is also the woody portion of plants. The carbohydrates, as we shall soon see, constitute a large portion of all the food consumed by man or animal. In the body the carbohydrates furnish heat and energy. They also serve as the main source for furnishing fat to the tissues. The carbohydrates can not build up the muscles, but they may nourish them and prevent their waste. The sugars in plants and fruits, the starch in tubers, roots and stems, and the woody fibre of the leaves, stems, etc., constitutes the carbohydrates used by man and beast as food. We can readily understand how abundant the carbohydrates are, and we will learn further on by the tables what quantities are required by some of our farm animals.

FAT OR ETHER EXTRACT.

The fatty substances of forage materials are called "ether extract" by the chemist. We can readily understand what sort of substance the fat of feeding materials is. Corn contains a considerable quantity of oil or fat, and linseed meal or cotton-seed meal still more. There is considerable oil in oats, but not much in corn stalks or wheat-straw.

A pound of oil from flax seed or Indian corn, for example, will give off more than two times as much heat when it is burned as will an equal weight of sugar and starch, and this being true, we may readily believe that for certain uses in the animal body fat or ether extract is worth more than twice as much as the same weight of carbohydrates in the form of sugar and starch. Oil and the carbohydrates contain the same elements, and so serve the same purpose in the animal body, namely, furnishing heat and energy and building up the fatty tissues. The fat of feeding stuffs is a concentrated form of fuel, just as coal is a more concentrated source of heat than is wood. Fat stored in the body is a supply of fuel for the body against a time of need. When an animal is starving, or when it is sick, it often lives for days upon the fat stored away in the body. The shrinkage which the body undergoes at such time is in part due to the loss of fat which is given up for the purpose of supporting life.

MINERAL MATTER AND WATER.

For building up the bony framework of the body there is required a certain amount of mineral matter, and some exists also in the tissues of the body. Generally, where animals are properly nourished otherwise, they are getting in their food all the mineral matter they require. Since we must be very brief, at this time we will not talk further about mineral matter.

A large part of the animal body consists of water, but this is supplied so abundantly as a rule that we need not consider it further.

DIGESTIBILITY.

Having considered all of the groups of substances required to nourish the animal, let us next consider their digestibility.

Food consumed by the animal passes into the digestive tract, which is a tube running through the body. Before any of the protein, carbohydrates or fat supplied in the food can be taken into the body from the alimentary tract, it must first be dissolved by the digestive fluids secreted from the walls of the alimentary canal. These fluids of various kinds attack the food materials containing nutriment, and dissolve more or less of it. The dissolved portions then pass through the linings of the intestines and enter the blood, while the indigestible portion passes on as waste. For present purposes we shall consider only the digestible portion of feeding stuffs.

A SAMPLE TABLE OF COMMON FEEDING STUFFS.

In the table herewith presented are given a few of the common feeding stuffs, together with the quantity of digestible material contained in 100 lbs. A school teacher would have to assist her a large chart, which would not only give the substances I here present, but many others as well, so that the farmer boy and girl could learn something about all the materials which are used on our farms, or might be used thereon, for feeding animals. Please remember that this is a sample table containing only a few articles which are required for to-day's discussion.

Table showing the digestibility of several common feeding stuffs:—

Feeding Stuffs.	Protein.	Carbo-hydrates.	Ether Extract.	Total Digestible Substance in 100 lbs.
Roughage—				
Corn stover	1.7	32.4	0.7	Lbs. Lbs. Lbs.
Red clover hay	6.8	35.8	1.7	
Timothy hay	2.8	43.4	1.5	
Oat straw	1.2	38.6	0.8	
Concentrates—				
Corn or corn meal	7.8	66.7	4.3	
Oats	9.2	47.3	4.2	
Wheat bran	12.2	39.2	2.7	
Oil meal, old process	29.3	32.7	7.0	

Studying this table, we learn that in 100 lbs. of corn stover (shoeck corn with the ears removed) there is 1.7 lbs. of protein available for the animal, i.e., digestible, while the carbohydrates equal 32.4 lbs., and the ether extract, or fatty matter, .7 lbs.

Red clover hay is four times as rich in protein as corn stover. We find still more protein in the concentrates, especially in wheat, bran and oil meal. While corn stover contains a considerable amount of carbohydrates, corn is much richer in that nutrient; oats are less rich than corn in carbohydrates, and wheat bran still poorer. In fatty matter or extract, corn is a great deal richer than corn stover, and oil meal is still richer than corn.

REQUIREMENTS OF FARM ANIMALS.

We readily understand that each farm animal requires a certain amount of food for the support of the body. This subject has been carefully studied by investigators, and here is what they report:—

Table showing the digestible material required daily by farm animals per 1,000 lbs. live weight:—

Digestible Nutrients.	Protein.	Carbo-hydrates.	Ether Extract.
Ox at complete rest in stall	0.7	8.0	0.1
Fattening cattle, first period	2.5	15.0	0.5
Milch cow, yielding 22 lbs. daily	2.5	13.0	0.5
Horse, medium work	2.0	11.0	0.6

Remembering that in each case the figures are for 1,000 lbs. of animal, we learn that an ox of that weight standing quietly in his stall, neither gaining nor losing in weight, requires .7 lbs. of protein, 8.0 lbs. of carbohydrates, and .1 lb. of fat or ether extract each twenty-four hours to support the body. In other words, this is the amount of food material necessary to run the animal machine without accomplishing any results further than body support. If we propose to fatten this same steer, we are shown by the second line of the table that the protein must be increased until 2.5 lbs. are given daily, and the carbohydrates run up to 15 lbs. and the ether extract to 5 lbs. The milch cow needs the same protein and fat as the fattening ox, but not quite so much carbohydrates, and the horse at medium work requires less nutrients than the cow, excepting the ether extract.

Please remember that this table is only a sample, and does not give all that the school teacher would have when teaching her class. On her chart or in the textbook used there would be a much larger table, showing the feed required for pigs of different ages, for the dairy cow giving different quantities of milk, also for the sheep, etc.

PRACTICAL APPLICATION OF TABLES.

We have now had two tables before us for consideration. In the first we were told how much digestible material is contained as an average in several common feeding stuffs. We have been told in the second how much feed different animals require for their proper support. In order to apply this knowledge, let us endeavor to calculate a ration for the dairy cow. Remember that by "ration" we mean the amount of food necessary for the support of an animal one day. Further, we mean by "standard ration" just the amount of nutriment the animal requires for one day—no more and no less, for here is where the usefulness of this line of instruction comes in. Every cow, for example, requires a certain amount of food for the support and nourishment of her body, and she must have this amount before she can return any profits to her owner. The amount that the cow requires for merely supporting the body is about that represented by the ox at rest in his stall, which is given in the second table. We see that when giving 22 lbs. of milk daily, the cow will require more than three times as much protein as the ox at rest; while she will need 13 lbs. of carbohydrates instead of 8, as required by the ox at rest. The other extract or fat required by the cow is five times as great as the ox at rest.

Let us next calculate a ration for the dairy cow, using the feeding stuffs named in the first table, and meeting her requirements as given in the third line of the second table.

CALCULATING A RATION FOR THE DAIRY COW.

In determining a ration for a dairy cow yielding 22 lbs. of milk daily, we choose from the list of feeds in the first table 8 lbs. of red clover hay, 10 lbs. of corn stover, 3 lbs. of oat straw for roughage, and 5 lbs. each of corn meal and bran for concentrates. The digestible nutrients in these are ascertained as follows:

Calculations for dry matter and digestible nutrients in trial ration for dairy cow:

RED CLOVER HAY.

	In 100 lbs.	In 8 lbs.
84.7 - 100x8	6.776
6.8 - 100x8544
35.8 - 100x8	2.864
1.7 - 100x8136

OAT STRAW.

	In 100 lbs.	In 3 lbs.
90.8 - 100x3	2.724
1.2 - 100x3036
38.6 - 100x3	1.158
.8 - 100x3024

CORN STOVER.

	In 100 lbs.	In 10 lbs.
59.5 - 100x10	5.95
1.7 - 100x1017
32.4 - 100x10	3.24
.7 - 100x1007

CORN MEAL.

	In 100 lbs.	In 5 lbs.
89.4 - 100x5	4.47
7.8 - 100x539
66.7 - 100x5	3.335
4.3 - 100x5215

BRAN.

	In 100 lbs.	In 5 lbs.
88.1 - 100x5	4.405
12.2 - 100x561
39.2 - 100x5	1.96
2.7 - 100x5135

Arranging these results in tabular form, with the standard of table for comparison, we have the following:

First trial for dairy cow weighing 1,000 lbs. and yielding 22 lbs. of milk daily—standard:

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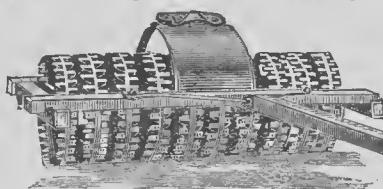
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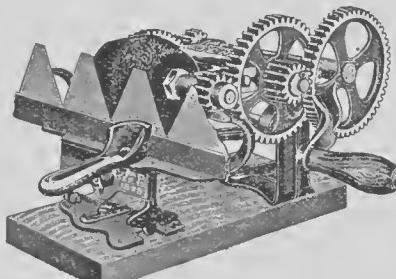
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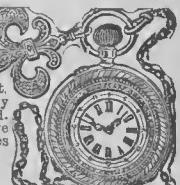
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Feeding Stuffs.	Digestible Nutrients.	Protein.	Carbohydrates.	Ether Extract.	Lbs.	Lbs.	Lbs.
Red clover hay, 8 lbs.	.544	2.864	.136				
Corn stover, 10 lbs.	.17	3.24	.07				
Oat straw, 3 lbs.	.036	1.158	.024				
Corn meal, 5 lbs.	.39	3.335	.215				
Bran, 5 lbs.	.61	1.96	.135				
First trial ration.	1.750	12.557	.580				
Standard	..	2.5	13.0	.50			

This trial falls considerably below the standard, especially in protein, and to correct this, 3 lbs. of oil meal are added.

Second trial ration for dairy cow weighing 1,000 lbs. and yielding 22 lbs. of milk daily—standard:

Feeding Stuffs.	Digestible Nutrients.	Protein.	Carbohydrates.	Ether Extract.	Lbs.	Lbs.	Lbs.
Ration as above	1.750	12.557	.580				
Oil meal, 3 lbs.	.879	.981	.21				
Second trial ration.	2.629	13.538	.79				
Standard	..	2.5	13.0	.50			

The first ration chosen, with 3 lbs. of oil meal added, gives us a ration very close to the standard.

We learn from this that a satisfactory ration for a dairy cow weighing 1,000 lbs. and yielding 22 lbs. of milk daily may be composed of the following: Red clover, 8 lbs.; corn stover, 10 lbs.; corn meal and bran, each 5 lbs.; oat straw and oil meal, each 3 lbs.

TEACHING THESE THINGS IN OUR COUNTRY SCHOOLS.

Farmers, what I have told you in this brief space of time represents a dozen talks or more, if need be, by the enthusiastic, intelligent teacher of the rural school. Lack of time and the necessities of the case have caused me to be brief before you to-night, and to crowd a great many facts into a few brief sentences. I ask you as thoughtful farmers if I have not presented a subject which is worthy of a place in the country school course of study? It is true I have used a few unfamiliar terms, and these words will sound strange when first heard by our country school children. I beg of you however, to think of the scores of words which you were compelled to learn and use when at school, and which you have forgotten since your schooldays. Do you not recollect that you were taught to use such words as "minuend," "subtrahend," the "least common multiple," the "greatest common divisor," and scores of others in arithmetic, grammar and other books? Do you not agree with me that the words "protein," "carbohydrates" and "ether extract" are just as important as many of those old schoolday words, and that the farmer boy and girl should become familiar with them? Do you not agree with me further that the country school teacher might profitably lead the little people she is teaching slowly ahead until after a time they have a fair understanding of these feeding tables, and the older ones be taught to calculate rations not only for the dairy cow, as we have done to-day, but for the horse, the fattening steer, the sheep and the pig. If this subject were taught in the country school, would not the boys and girls coming home at night have interesting topics for discussion at the supper table, and would not farther and mother as well as John and Mary become interested? When doing his daily chores, would not John supply feed to the farm stock with more carefulness than if he had never thought of these subjects before?

IS IT NOT PRACTICAL?

If our teachers can acquire a knowledge of arithmetic, physiology and other bran-

ches sufficient to pass examinations there-on, and to teach these branches more or less successfully, could they not in time gain sufficient proficiency in some of the farm topics to teach them effectively, and to the great advantage of all concerned? Remember that what I have here presented is only one of many subjects which might well come into our course of study for the rural schools. If such topics as these were added to the course of study, would not much good be accomplished thereby? The facts that I have gone over concerning the feeding of farm animals are useful not only for the stable and feed-lot, but they apply indirectly in many ways to human nutrition, and so our boys and girls, while studying these topics in the country schools, would gain a great deal of helpful information. Can not and should not our teachers prepare themselves in the near future to give instruction in some lines of agriculture at least as well as in branches now in the course of study?

A lively discussion followed Professor Henry's paper, and he answered many questions.

Dr. J. G. Rutherford, M.P., was the next speaker, his topic being "Stable Hygiene." He spoke off-hand on this topic last year, and promised a good paper for this meeting, and did so, which we hope to give in the future.

Several votes of thanks were passed, and the meeting was brought to a close.

Auction Sales of Swine.

The Department of Agriculture at Regina has received information from the Ontario Government to the effect that the purchase of the boars and sows to be offered for sale by public auction at various points along the Calgary and Edmonton Railway in Northern and Southern Alberta, under the auspices of the Territorial Government, is progressing rapidly. A very superior grade of animals are being secured, and it is anticipated that the shipment will reach Alberta towards the end of the present month, so that the sales may be held between the 1st and the 15th of April. The final dates and places of sale will be advertised as soon as it is possible to fix them definitely.

Among the Breeders.

Yorkton butchers have been paying farmers 7 cents per pound for dressed pork all winter, and have been unable to secure enough to supply local demand.

Gordon, Ironside & Fares have secured two large ranches in the Yorkton district, and are winter-fattening several hundred head of cattle in their stables there.

George Hay has auctioned off a car of French-Canadian mares at Macgregor. No better class of horse, either for work or breeding, can be imported.

Dr. Rutherford, M.P., has bought at Macgregor a saddle horse for use by Gen. Hutton in South Africa. Frank J. Thompson was the seller.

Wm. Sharman, of Souris, has been employed by the C.P.R. to select the bulls they are to buy from the Manitoba breeders, and is now on the road for that purpose. Breeders should send him at once a list of what bulls they have on hand.

R. I. Nelson, Wawanesa, has gone south to Towner Co., N.D., with 200 head of cattle. More will follow, as prices are good over there for anything from Manitoba.

Jas. Gorrell, Pilot Mound, has bought from Hon. Thos. Greenway the massive red bull "Defender," bred by W. C. Edwards, Rockland, Ont., to head his Shorthorn herd. "Defender" weighs at two years ten months, 1,960 lbs.

J. Herriot, Souris, writes: "I have sold my one-year-old bull to head the herd of N. W. Paterson, Wawanesa. He has a nice herd of pure-bred Holsteins, all good milkers. My own cattle are all milking well this winter."

The Farmer is sorry to learn of the loss to Mr. E. Sutton, of Roland, of his two-year-old Shorthorn bull "Captain," brought about through weakening from loss of blood after dehorning. The bull, we understand, was a large, fine animal, and his death is a heavy loss to the owner.

One of our staff called recently on Adamson Bros., Gladstone, who keep a few Shorthorns in addition to a large stock of grades. We found them using as herd bull "Prairie Sportsman," bred by W. C. Edwards, Rockland, Ont. He is a low-down, square beast, pretty well filled out, and carries a very good head. Some well-built cows and a few young animals, including a nice young bull calf, "Prairie Sportsman 2nd," make up the lot. We were pleased, in a district where so few pure-bred stock are kept, to find such excellent foundation animals in worthy hands.

Wm. Kitson, Burnside, Man.: "The young turkeys that won The Nor-West Farmer's special prize of a lady's gold watch were not scored by the judge, but the weight of the young cockerel was 29 lbs. He was a trifle over eight months old. I expect this is, age considered, the heaviest turkey ever exhibited in Manitoba. He was hatched and raised by a hen. The two turkey pullets were two beauties, but in thin condition, weighing only 17½ lbs. and 15½ lbs., though having sufficient size of body to have weighed 22 lbs. and 20 lbs. Besides your special prize, the cockerel won first and the two pullets first and second prizes. I have sold my old turkey tom. I had a great many letters of enquiry for him through The Farmer."

Geo. B. Johnston, of Austin, has recently made the purchase from Hon. W. Clifford of a bunch of his Polled Angus stock. The lot includes the yearling bull "Black Prince," which will be remembered by a number of our readers as first prize calf at Winnipeg last year. His sire, "Chiltern of Brandon," was also given first place and sweepstakes, and his dam, "Mayflower of Brandon," carried off the red ticket in the "Doddie" cow class. "Black Prince" himself is a lusty young chap, and is no mean starter for a new herd. Mr. Johnston has also purchased a bunch of heifers from Mr. Clifford. As Mr. Johnston is well known to us as a first-class farmer, we are pleased to notice this new branching out on his part.



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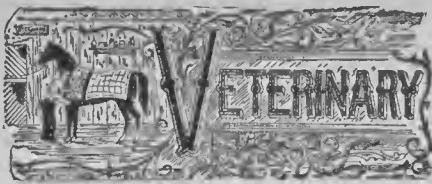
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Answers to Questions.

By an Experienced Veterinarian.

As it is desired to make this column as interesting and valuable as possible to subscribers, advice is given in it free in answer to questions on veterinary matters. Enquiries must in all cases be accompanied by the name and address of the subscriber, but the name will not be published if so desired. Free answers are only given in our columns. Persons requiring answers sent them privately by mail must enclose a fee of \$1.50. All enquiries must be plainly written, and symptoms clearly but briefly set forth.

Itchy Nose.

Subscriber, High Bluff, Man.: "I have a mare that rubs her nose on the manger when in the stable, and when working shakes her head as though a fly were on her nose. What is the cause and what will stop it?"

Answer.—There must be an irritation of the skin of the nose. The following lotion is generally effectual in such cases: Ichthyol, one drachm; glycerine, half an ounce; water, eight ounces. Wet the part frequently with this lotion.

Sore Mouth.

H. D. Giles, Portage la Prairie, Man.: "Have mare with mouth badly ulcerated by skunk grass. What is the remedy?"

Answer.—Remove all the fibres of grass from the sores, by picking them out and, if necessary, scraping them with the edge of a spoon. Then sponge them with boracic acid solution, one in twenty. Keep the mouth clean by frequent applications of this antiseptic solution, which is not poisonous. Be careful to avoid feeding hay containing skunk grass.

Chronic Cough.

New Subscriber, Austin, Man.: "I have a six year old Clyde horse, has had cough about three months, always coughs after drinking, or after having a sharp pull breathes heavily. Is in good condition. Feed straw, oats and bran, occasionally boiled feed. Can anything be done to relieve him? If so, kindly prescribe."

Answer.—Don't feed any bulky feed such as straw unless at night. Give him twice a day in his feed the following powder: Powdered digitalis leaves, one scruple; powdered muriate of ammonia, one drachm.

Painful Exostosis.

C. M. C., Millwood, Man.: "I have an ox with hard painful swelling on one of his hind feet between the hoof and the fetlock joint, caused by the whiffetree failing against his heel while plowing. It has troubled him for the last year. Please prescribe."

Answer.—Clip off the hair on the swelling and rub in well for ten minutes the following blister: Powdered cantharides, 1 drachm; biniodide of mercury, 1 drachm; lard, 1 ounce. Be careful not to let the blister get in between the claws. When the blister has been on two days wash it off and apply lard to the part. Repeat the blister every two weeks until the soreness has disappeared.

Bots.

R. O. Ridgeland, Man.: "Have an old horse that occasionally passes a few bots. He eats and drinks well and is all right otherwise. What shld I do?"

Answer.—If, as you say, the horse shows no symptom of having bots except the passing of them occasionally, you need not trouble to treat him. The presence of bots is only injurious to the horse when they are quite numerous, and generally they may be present to a certain extent without doing any harm. The bot remains in a horse's stomach only from one summer till the next spring, when it passes away in the natural course of events, so that very shortly your horse will get rid of them himself.

A Painful Swelling.

J. D., Elgin, Man.: "A very hard and painful lump about six or eight inches wide, and protruding about three inches, appeared on my horse's side. I applied a poultice, but with poor results. There are long lumps on his belly, but otherwise he appears to be in good condition."

Answer.—From your description, it appears more like what would result from an injury than anything else. Could the horse have been

kicked, or hooked by a cow, or wounded with a splinter? A painful swelling of this kind will usually either disappear in a few days or develop into an abscess, and get well after discharging some matter. If it still remains, foment with hot water and afterwards rub with soap liniment.

Cough.

Subscriber, Grenfell, Assa.: "I bought fourteen sheep last December; one of the ewes had a cough when I got her and is not better yet. She seems worse in the mornings; when I open the door the air seems to make her worse. She will cough till she almost strangles. She is in good condition; has a good dry place for nights and runs around a hay stack every fine day. What is the cause and cure or would it be better to get rid of her? Would it be spear grass or wild barley in her throat?"

Answer.—Blister her throat with mustard and give her twice a day a tablespoonful of the following mixture:—Fluid extract of belladonna, six drachms; glycerine, one ounce; syrup of squills, two ounces; water, eight ounces. If this does not cure her you had better get rid of her.

Fibrous Tumor of Shoulder.

H. H. W., Boissevain, Man.: "Large soft swelling came on point of mare's shoulder some time ago. I opened it at bottom and a quantity of thin watery blood came out. I kept it open over a week and syringed with weak carbolic acid and then let it heal, keeping it gashed. It has left a hard lump (as hard as bone). Edge of sweat pad just covers it and does not appear to interfere with her drawing a load. Can you give me a remedy. Is 'caustic balsam' suitable? What are the chances of this troubling when spring work commences?"

Answer.—External remedies are generally useless in such a case and the growth must be removed with the knife. Unless the swelling is where the pressure of the collar will not reach it you are sure to have trouble from it when hard work begins.

Capped Elbow.

J. S., Glenlea, Man.: "I have a mare 5 years old, has a lump on leg, and by a picture of an unsound horse, I would call it a capped elbow. It is a soft lump and runs master at times like a running sore. Will you please direct me? Her water is never the right color, is thick and it comes from her painfully."

Answer.—The swelling should be lanced at the lowest point. Keep the edge of the knife turned away from the bone and don't be afraid to make a deep incision. After the pus has run out wash the cavity with a solution of carbolic acid in water 1 part to 20, using a syringe. Do this twice a day until it heals. See that she cannot bruise the part with heel of shoe, or by lying on bare floor.

For the water give her a half-pint of vinegar in the drinking water once a day, and once or twice a week give a teaspoonful of saltpetre in the feed.

An Itchy Skin.

N. W. M., Morris, Man.: "I have a mare that has not done well for a time, did not feed well, scoured at times, and one day she started to rub herself till the hair came off and in some places the skin is off too. Has been fed three-quarters of a gallon of oats and did no work except clean stables with a boat. She did same a year ago. The itching came on her at once. She does not rub much now and eats her oats up clean."

Answer.—Examine the skin carefully for lice, and if any are present, apply an appropriate remedy, such as have been recommended from time to time in this column. Change the mare's feed and give her less oats or more work, bran mashes and some roots if possible. Twice a day give in the feed half an ounce of finely powdered hyposulphite of soda. To relieve itchiness and heal the raw spots apply a lotion composed of ichthyol, two drachms; glycerine, one ounce; water, one pint.

Strongylus Armatus

Subscriber, Bellegarde, Assa.: "Year old colt has worms resembling red silk about half an inch long. What is the quickest and surest cure for them? She also rubs off patches of hair along the neck and body. Don't think she has lice. What do you recommend?"

Answer.—The worms infesting your colt are not of the ordinary variety of pin worms, but a species which fortunately is not so common, as it is much more injurious to its host. This species is found attached to the mucous membrane of the large intestine, and feeds not upon the contents of the bowel, but by sucking blood from its walls. Hence its red color and its destructive nature. In consequence of its feeding habits there is great difficulty in getting rid of them, for as they do not feed on the intestinal contents, the usual vermicifuges are not of much use. We recommend you to use spirits of turpentine, giving a few drops in the feed twice a day and increasing the dose gradually up to a teaspoonful. After the colt has taken it for a week give him a purge with six ounces of linseed oil, and when he has stopped purging repeat the previous treatment. For the skin irritation choose a mild day, and wet the skin with creolin and water one part to forty.



A case of lump jaw in your herd means immediate loss; it may mean the infection of the rest of your herd; it may result in the distribution of the germs all over your pastures. All loss and danger can be positively averted by prompt use of

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Gladstone	Lv. Tues., Thurs., Sat.	15 05
Gladstone	Lv. Mon., Wed., Fri.	18 15
Neepawa	Lv. Tues., Thurs., Sat.	16 03
Neepawa	Lv. Mon., Wed., Fri.	15 55
Minnedosa	Lv. Tues., Thurs., Sat.	17 00
Minnedosa	Lv. Mon., Wed., Fri.	15 15
Rapid City	Lv. Tues., Thurs., Sat.	18 20
Rapid City	Lv. Wed., Fri.	13 15
Birtle	Lv. Sat.	19 55
Birtle	Lv. Tues., Thurs., Sat.	19 30
Birtle	Lv. Mon., Wed., Fri.	12 30
Binscarth	Lv. Tues., Thurs., Sat.	20 50
Binscarth	Lv. Mon., Wed., Fri.	11 25
Binscarth	Lv. Wed., Fri.	11 05
Russell	Lv. Tues., Thurs., Sat.	21 40
Russell	Lv. Wed., Fri.	9 40
Yorkton	Lv. Sat.	1 20
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Arthritis from Rheumatism.

S. J. Y., Wetaskiwin, Alta.: "I have a 12 year old mare, weighs about 1,100 lbs. She is in good condition. Have been working her last three weeks. Last week noticed she was kind of stiff in hind quarters. This morning the second joint inside of both hind legs are badly swollen."

Answer.—Rheumatism in old horses often takes the form seen in your mars, producing a chronic inflammation of one or more joints. Give her a mild purgative, such as a pint of linseed oil. Bathe the swollen parts with hot water and afterwards rub them well with the following liniment: Alcohol, one ounce; belladonna liniment, two ounces; chloroform, three ounces. Mix.

Your request for an answer by mail had to be disregarded because you did not comply with the conditions at the head of this column.

Hæmorrhage.

M. D., Treherne, Man.: "I have a mare, about 9 years old, that is ejecting blood by the womb. It seems to be real blood. It does not appear to affect her much. She is in good order other ways and feeding as usual."

Answer.—It will require a careful examination by a veterinary surgeon to find out the source of the blood, which may come from the womb or from ruptured veins in the vagina or passage. The following treatment may effect a cure in a simple case, but if after a week's trial you find no improvement you had better consult your nearest V.S. Dissolve half an ounce of tannic acid in a gallon of hot water and, when cool enough to bear the hand in, inject it slowly and gently into the passage with a syringe. Repeat once a day. Give the mare two drachms of the fluid extract of ergot in her feed twice a day. Avoid putting her to any heavy pulling until she has recovered.

Capped Hock.

G. Y., Glenella, Man.: "1. Horse 10 years of age sprained his right hind leg last spring, came to work all right, is not lame now, but there is a lump on the hock as if cap was displaced. It is not painful. 2. Horse had sore shoulder, but is healed, leaving small lump. Can it be taken out by blistering or will it be necessary to have it cut out by a veterinary surgeon?"

Answer.—1. Blister the capped hock repeatedly with a strong absorbent blister, and you may succeed in removing the swelling, but not in every case. The enlargement at the point of the hock is often permanent, as it is frequently caused by striking the part against the stall post when a horse is playfully kicking at his neighbor, you should render this impossible by placing him in a loose box, or padding the post.

2. This is a case for surgical interference. Such callous enlargements of the shoulder can only be removed by the knife.

Intestinal Worms.

Subscriber, Plumas, Man.: "I have a colt three years old this spring and I wish to break him in, but he has been failing all winter and is now quite thin. He is dry in the hair and has no licks at all when let out with other horses, just goes around and mopes with his head down. Eats well, has a good appetite, has been fed a gallon and half oats and bran, twice a day all winter, with lots of hay. A yearling colt has worms very bad, passed some 4 inches long. Has good licks. I have been feeding both of my colts condition powders."

Answer.—Both colts have worms and the same treatment may be applied to each, but the yearling should have only one-third the dose prescribed for the three-year-old. Prepare this one by starving it for twenty-four hours, then give it one ounce of santonin in a small bran mash. An hour later give it sixteen ounces of raw linseed oil. Feed no hay until this has been down for three hours, then a moderate quantity may be given. Afterwards put on a diet of hay and oats, and give a bran mash twice a week. Give twice a day in the feed a small teaspoonful of finely powdered sulphate of iron, and a tablespoonful of salt.

"Lumpy Jaw" or Actinomycosis.

J. W., Cannington Manor: "Please explain the nature of lumpy jaw."

Answer.—This disease has been described at length in this paper more than once and we can only find space for a brief sketch to-day. It is caused by minute fungus, allied to the smut plant of wheat, which grows upon various grasses and straw. When this fungus is accidentally planted in the tissues of an animal, as for example, when a sharp particle of straw wounds the gums or throat, it grows and multiplies. The tissue in which it is growing is irritated by it and becomes swollen, and as the fungus multiplies the swelling becomes larger. Thus the large growths of lumpy jaw are formed, and it is owing to the mode of infection that the lumps are generally on the head or neck. After a time the swelling generally ulcerates and a discharge of matter takes place. This contains many germs of the fungus, and falling upon hay or grass consumed by other cattle may convey the disease to them. It is not infectious in any other way.

Lumpy Jaw—Distemper in Dogs.

Subscriber, Didsbury, Assa.: "1. I have a cow that had lumpy jaw and have applied iodide of potassium, as I think, successfully, but the man who owned her before me used Fleming's Lump Jaw Cure, and rubbed it on outside the skin so as to burn all the skin, which still keeps raw. How can I heal that up?"

"2. What is best for distemper in dogs?"

Answer.—1. Wash the sore clean and then apply a little zinc ointment once a day until it is healed.

2. Distemper in dogs is a disease which cannot always be treated on the same lines, and success depends not so much on the drug used as in the care and nursing of the animal. Keep the dog warm and diet him carefully. The food should be easily digested and given in small quantities and often. At the onset of the disease give an emetic of salt and water. Afterwards half a teaspoonful of ammoniated tincture of quinine in a little water three times a day. If the eyes are "mattery" wash them often with a soft rag and lukewarm boric acid solution one part to twenty.

Intestinal Worms—Constipation.

Subscriber, Hartney, Man.: "I have a mare six years old which has been troubled with something like Indigestion for over a year, is very thin and her coat is dry. She has a ravenous appetite and very much constipated and inclined to be bloated. When driven hard or worked becomes exhausted and the muscles of the fore limbs tremble. She is very dull and has passed several long round worms. Does not seem so bad when feeding on grass. Please give the cause and prescribe."

Answer.—Prepare the mare for physic by feeding her on bran mashes without hay for 24 hours, then give her a physic ball composed of eight drachms of Barbadoes aloes, one drachm ginger, and enough soft soap to make a ball. After giving the ball continue to feed bran mashes without hay, and as soon as she begins to purge give her the following vermifuge drink: Santonin, half an ounce; oil of turpentine, two ounces; milk, one pint. A few hours after this has been given she can have a little hay, and the next day resume her ordinary diet. To tone up the digestive system you can follow the treatment by giving three times a day a large tablespoonful of this powder: Sulphate of iron, four ounces; sulphate of soda and common salt, one pound of each; bicarbonate of soda, two ounces. To be finely powdered and well mixed.

Phlebitis.

D. H., Galnsboro, Assa.: "Please advise me what to do with a horse that is swollen in one of his hind legs from the hock downwards. The vein that is in the inside of his leg is greatly enlarged. He never bears any weight on it, and keeps lifting it up every few seconds. He suffers great pain, so much so that he is continually sweating. When forced to walk he sets down the heel first, but cannot bring the leg back under like the other, just limps along on the three legs. I poulticed it and it burst shortly after, and is running blood and matter. I keep bathing it with hot water, but he does not seem to get any better. The leg is still very hard."

Answer.—The inflamed vein in the inside of the thigh obstructs the return of blood from the parts below and causes the swelling of the leg, etc. Apply a fly blister along the course of the vein and leave it on for 24 hours, then wash it off and smear the part with vaseline or lard. Give internally one drachm of iodide of potassium twice a day in feed or water. Feed chiefly bran mashes and hay. After the effects of the blister have passed off rub in every day a little mild mercurial ointment. Continue to foment the lower part of the leg and wash the sore with carbolic lotion 1 to 30.

Lymphangitis.

Subscriber, Qu'Appelle, Assa.: "I have a horse 7 years old that has had four attacks in the course of six months of some trouble in his hind leg. He will get lame, and his leg commences to swell in the course of five hours, pains from thigh down to hock. Will get better in a few days, but leg remains considerably swollen. Fed principally on hay; doing light work, enough for exercise. Please give cause and cure."

Answer.—The lymphatics are a system of small tubes, like the veins, except that they do not carry blood. They are distributed to every part of the body and carry off from the tissues the waste products of animal life. They are to the body what the sewers are to a city and if any of them become blocked up, the part of the body which they serve becomes swollen and painful. This is what happens in the hind leg of your horse at intervals, and the frequent recurrence of the trouble shows that there is a chronic obstruction in the lymphatic circulation of that leg. The course of the main lymph channels is up the inside of the thigh and you should treat them daily by gently rubbing in a little mild mercurial ointment from the hock up to the body. A drachm of iodide of potassium twice a day in the feed or water will help to remove swelling and the horse should get daily exercise, and be fed no oats unless he is at work.

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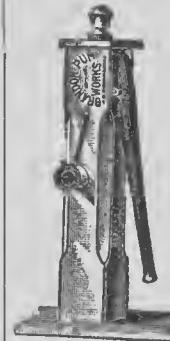
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Agalactia—Milk from Lumpy Jaw Cows.

Subscriber, Miami, Man.: "1. I have a heifer three years old that calved four days ago. She gives no milk, only a spoonful at a time. She was up to time and made a pretty fair bag, first calf. Have been feeding lots of hay, a little barley chop and turnips. Another the same age came in at same time gives three quarts. 2. Is there any danger in milk from a lumpy jaw cow? 3. What is the best remedy for sore shoulders in horses?"

Answer.—1. Non-secretion of milk is not unusual, and if not due to imperfect development of the lacteal glands may be only temporary, and is unlikely to persist through life. Sometimes the secretion may be brought on, even after three or four days, by feeding plenty of sloppy bran mashes, and some stimulating seeds such as a tablespoonful of aniseed twice a day, while the udder is frequently rubbed and the teats puffed at.

2. The milk from lumpy jaw cows is safe to use provided the udder is healthy and free from lumps.

3. For sore shoulders bathe them when returning from work with alum water, and before going out smear the raw place with zinc ointment. Keep collars free from scabs, and bathe the shoulders by light work before seeding commences.

Throat Cough—Result of a Kick.

Subscriber, St. John, North Dakota: "1. Mare 9 years old, troubled with a cough in the morning when eating oats. Coughs but once at a time; has been so for a couple of years. Sometimes for a period of two or three weeks will not cough any and then for two or three mornings in succession will cough again. Diet is hay and oats, occasionally a bran mash and a feed of potatoes. 2. Have a mare that got kicked just above the muscle of the shoulder, worked her next day. On returning home from work noticed a swelling under belly. Have done nothing with her since, about five days ago. The swelling has spread over the largest portion of belly and is starting up the breast. May have been kicked on belly, but saw no signs of it. Did not swell where she was kicked on shoulder. The swelling is not hot and mare is in no pain. Please prescribe."

Answer.—1. Your mare has an irritable throat and the particles of dust, chaff, etc., in the feed make her cough when they come in contact with it. The condition is not serious and you can probably cure the cough by screening all dust and chaff from the feed, or try dampening it slightly with water.

2. Bathe the swelling frequently with hot water, then rub dry, and apply a little of the following liniment: Liniment of iodine and soap liniment, of each one part; methylated spirits, four parts.

Blackleg.

Rancher, Gleichen, Alta.: "Heifer rising two years, has been running on range all winter; was in splendid condition and good health one day and the next afternoon had soft swelling along the back, extending from just behind shoulders to over the kidneys, but was grazing as usual. After watching her for a little time I thought she walked slightly stiff in hock, so decided to take her home for treatment. She cut from herd easily, without running, but in half a mile seemed tired out and urine was dropping from her constantly. In a few minutes more she stopped, hung head, staggered, shivered in hind quarters and lay down suddenly. Rolled over on side twice, then with one or two slight struggles and gasps was dead—and this all in less than one hour from the time she was grazing indifferently. I cut the swelling from end to end and saw it contained only congealed blood of a dark color, but not black (a pail full). No blood ran after cutting through this skin. I wished to open her, but as I had a fresh deep scratch on right hand I did not do so as I was afraid it might be anthrax or something similar. If she died from any contagious disease, please tell me the best way to keep it from spreading in the herd, the best way to destroy carcasses, etc. There was no extra swelling or stiffness in the legs next day."

Answer.—The symptoms point unmistakably to "blackleg," although it is unusual to see this disease in the winter time. The carcass should be burned if possible. To prevent contagion to cattle grazing over infected lands you should have them inoculated with Pasteur's "blackleg" vaccine. Only the young cattle will require it, as the disease seldom attacks those over two years old.

Rupture of Bladder—Blackleg.

G. M. A., Josephsburg, Alta.: "1. We have some sick calves. A government V.S. said their stomachs were out of order. Symptoms as follows: One calf took sick about six weeks ago, it did not make any water, and would not eat, it drank a little water. Was all the time gritting its teeth, and would lift up its foot and kick hock. It died in about 15 days. We opened it and found it full of water. The bladder was burst. The bladder was lined with sediment or some hard, gravelly like substance. What is it? We have two more sick with the same disease. 2. We had a yearling steer which we put in the corral and dosed for lice. We turned him out, he was all right that day. The next morning

he was sick, a little lame in the right hind foot. About noon he could not get up at all, but died about nine that night. We opened him and found a dark red or nearly black patch on his back and run in streaks down the legs. Do you know what is it and is there any cure? We had eight calves and two-year olds die with it last fall."

Answer.—1. The diet or water of the calves has been too rich in lime salts and these have formed a sediment in the bladder. Some of the larger particles have not been able to pass out through the penis and have blocked up the tube. Retention of urine followed, then rupture of the bladder and death. Avoid feeding bran to them, as this is a feed extremely rich in earthy salts. If any are still ailing give them vinegar in their water, or horlic acid in their feed.

2. This is probably a case of "blackleg," or symptomatic anthrax, a disease which is contagious to young cattle running on infected pasture lands. It is incurable, but can be prevented by inoculating all young stock with Pasteur's vaccine.

Liver Complaint—A Bog Spavin.

Subscriber, Manitou, Man.: "1. What is the matter with my hens? They are dying off rapidly, they turn yellow around the gills and set around for a few days and then die. Please tell me what is the best thing to do for them. 2. I have a two year old colt, has a lump on its hock which is full of oil, so V.S. told me, and that it does not affect the leg at all, except for appearance. Tell me what is best to remove the lump."

Answer.—1. Poultry diseases are a little out of my line and without a more definite knowledge of the case than is obtainable from your description I would not like to prescribe. A poultry man suggests that the cause is what he calls liver complaint. The bile is secreted in too large quantities and permeates the adjoining organs, causing jaundice (shown by yellow head) and poisoning, which soon results in death. A post-mortem examination will show the distension of the hiliary reservoirs. In such a case it is recommended to give a purgative of half to one grain of aloes and a complete change of diet, having as great a variety as possible.

2. The colt evidently has a "bog spavin," which is merely a bulging out of the capsule of the joint at the place where there is least resistance, towards the inside of the leg. This capsule is full of synovia or "joint oil," and must not be opened. Sometimes as a colt grows older, these enlargements disappear, sometimes they remain through life. Usually they do not cause any lameness, but are so unsightly that their removal is sought. Frequently repeated blisters are the most effectual remedy. Apply cantharides ointment 1-6 well rubbed in for ten minutes. Repeat every ten days.

Leucorrhœa—Thoroughpin.

W. R. F., Rosenort, Assa.: "1. I have a mare 12 years old which I would like to breed if possible. She has raised several colts, the last one three years ago; has never been served since. She is a little nervous. If I clap my hand on her while quiet she will jump and pass a little milky water. Her tail is clotted with this discharge. Otherwise she is in healthy condition. Would you advise trying to breed her?

"2. I have a black horse 9 years old, weighing 1,600 lbs. I am told he has thoroughpin. When I back him he appears worse. He will hold one of his hind legs up and out a little and at the same time throw forward the opposite front foot and keep tapping the manger with it. He has lumps in his legs in the hollows of his gambols, the left leg having the larger lump and being the worst. Lumps are soft when feet are on the ground, but hard when he holds them up. If I do not back him he will hold his legs up but little, but if I back him much he becomes much worse, goes lame on his left leg and when I make him stand around in the stall he will jump over as though he has cramps in his legs. He is a splendid worker, and if you could advise how to put him out of misery I would be much obliged."

Answer.—Your mare is affected with leucorrhœa and until she is cured you may not be able to get her in foal. This is a catarrh of the vaginal passage and will require local, as well as general treatment. Get a large syringe and wash out the vaginal passage once a day with the following lotion: Fluid extract of hydrastis canadensis, one ounce; warm water, one quart. Give her in her feed twice a day a tablespoonful of the same fluid extract.

2. The black horse has thoroughpin on both hind legs, and possibly is getting a spavin on the left one. The lameness in this leg is very suspicious of it and you should examine carefully, comparing one hock with the other to see if there is any bony growth at the lower part of the joint on the inside towards the front. For the thoroughpin, use Gomhault's Caustic Balsam according to directions.

Out of Sorts—Side Bone.

D. D. M., Dunara, Man.: "1. I have a mare 5 years old in spring, which worked all summer and in the fall. She all at once got off her feed and didn't eat for a couple of days, she gaunted up, then she began eating her grain, but still kept gaunt and apparently had no life or ambition. She didn't seem to be in any pain, only

seemed dull. We then gave her a physic of linseed oil, but it seemed to make no change in her. She kept on gaunt and dull for about a month, then she seemed to get better and feel good, would play when she was out. Then I began to work her for about three weeks off and on, not very heavy, when she all of a sudden refused her oats and gaunted up in one night. She does not seem in any pain at all. In the summer we feed about a gallon of oats and in the winter about half a gallon each. Her teeth are all right, and she is glossy in the skin, but when she takes these dumpish turns her eyes get very dull.

"2. I have a mare that has a growth on both sides of her hind feet, just above the hoof, about an inch and a half square. I have not given it any treatment. She is lame for a while, when she starts to travel. I think it is a sidebone. Please tell me what you think it is and what treatment would be good. It came on last spring."

Answer.—1. It would be difficult to name the malady affecting this mare last fall, but from the symptoms shown, and the rapid recovery she made, the attack was probably not an actual disease, but merely a temporary derangement of some of the functions of the body, inducing loss of appetite and a general feeling of "out of sorts." At the age of your mare horses suffer occasionally from trouble with their teeth, the milk teeth remaining too long after the permanent ones have made their appearance, and something of this kind may have been the matter.

2. If this is sidebone, and from your description of the location of the growth, there seems no doubt of it, it is most unusual to find it on the hind leg. Rub in a little of the following ointment once a day: Iodine crystals, one drachm; iodide of potassium, one drachm; vaseline, one ounce. If this does not remove the lameness, you should lay her up and blister the part.

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When Jay Gould was peddling around a stock of tinware on his back, offering his wares from door to door, few deemed him a future multi-millionaire; but he saved up cash enough in the peddling business to start leather tanning, and this was the first step to other successes. It's the first few hundred dollars which are universally conceded to be the hardest to get together, and ambitious young men should not neglect an opportunity which many throughout the country are already availing themselves of, to help along their small capital account. The Herbaroot Medical Co., P.O. Box 4,544, Montreal, sell exclusively through agents, and some young men and women, even without devoting all their time to it, are earning from \$50 to \$200 a month selling their medicines. If you want to do likewise, write at once, to secure your territory, for full particulars.



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THE NOR'-WEST FARMER

ISSUED TWICE A MONTH.

ESTABLISHED 1882.

The Only Agricultural Paper Printed in Canada between Lake Superior and the Pacific Coast, and issued on the 5th and 20th of each month.

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Either on business or editorial matters, should be addressed simply "The Nor'-West Farmer, P.O. Box 1310, Winnipeg," and not to any individual.

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Subscribers who miss any of the issues of "THE NOR'-WEST FARMER" should drop us a card at once and secure same, as we want every subscriber to get **every copy**. Do not delay in sending, as our supply of extras sometimes becomes quickly exhausted.

WINNIPEG, MARCH 5, 1900.

ers of Manitoba and the Northwest Territories, we feel confident that this column cannot help giving great satisfaction.

The rates will be one cent a word for each insertion, which charge must in every case be prepaid. No advertisement taken for less than 25 cents.

THE CONVENTIONS.

In point of interest and attendance, the recent conventions were without a rival in the history of the Province. The presence of so many distinguished authorities from outside the Province, no doubt helped much towards this end. The inspiration and helpfulness that comes from men engaged in the same work meeting together and talking over matters pertaining to their work, was not wanting in these meetings. The Farmer feels sure that those who had the privilege of attending them will not in any way begrudge the time and money spent, but upon the contrary will feel that it was well invested, and that it will yield a bountiful return.

The Cattle Breeders' meetings were perhaps the best attended, and this was, no doubt, aside from being the larger stock interest, owing to the fact that transportation rates, always of interest to the breeder, and the free distribution of purebred sires by the C.P.R., were to come up for discussion. Andrew Graham's admirable paper on this subject, the discussion which followed, and the statements made by C.P.R. officials, formed the most interesting part of the programme. No doubt some of the breeders felt that the wind had been taken out of their sails, so to speak, when they found that they were in ignorance of the favorable rates and conditions allowed by the railway authorities. It showed how necessary it is for every breeder to keep well posted in these matters, and how equally necessary it is that they shall be frequently notified of the existing rates. Those present could not help noting that the statements made by the C.P.R. officials were explicit, and that they said that the breeders' interests were the interests of the C.P.R. From other statements made, all feel they have good grounds for believing that when the committee, appointed to see the railway authorities, wait upon them, better terms will be secured than ever enjoyed in the past. This discussion shows plainly that when a misunderstanding with the railway companies arises, it is better to talk the matter over with them frankly than to stay in the dark and growl.

The distribution of free sires by the C.P.R. has awakened an interest in purebred stock which cannot help being beneficial, even if it has worked some little injury to the breeders, for never before have the merits of pure-blooded stock been so thoroughly discussed throughout the country. The Farmer has taken a stand against this matter from the first, and is pleased, indeed, to inform its readers that after the present lot are purchased, there will be no more of it. We do not believe that it was in the best interests of the live-stock industry of the country. No doubt many farmers would like a free sire, but there is every reason to believe that in lieu of this the railroad authorities will give greatly reduced fares to those in search of good sires. This, combined with more favorable transportation rates for animals, will put the live-stock industry on a more sound basis than any free distribution can ever do.

One noticeable feature of the week was the interest taken in the Horse Breeders' Association. This Association has just been existing. With the rise in value of horse flesh, and increased breeding, there has come a greater interest in the Associa-

tion, and also the demand that it be to the horse breeders what the other associations are to their members. The Association is thus starting out with a new lease of life, and The Farmer hopes that it will soon rank in importance and influence second to none. There is certainly great room and need for it.

The poultry show added its share to the week's value in an educational way, the process of feeding by the cramming machine being watched with much interest. The reports from the various creameries and cheese factories have a great educational value, though they also show the difficulties under which the dairy industry is laboring. Professor Henry's address on "Agricultural Education" put this subject in a new light to many, and cannot but help on the day when Manitoba will have an agricultural college of her own.

Not the least pleasing feature of the conventions was the presence of two Dominion officials interested in live stock. The Farmer hopes for great things for the live stock industry of Western Canada under the organizing and guiding hand of such a capable man as the new Live Stock Commissioner is known to be. There are many problems for him to solve, and which, if solved in the right way, will tend to the prosperity of both the stockman and farmer. On the whole, the conventions of 1900 will, we think, mark a new era in the onward progress of Western Canada.

PROGRESSIVE AGRICULTURAL TEACHING.

Everyone who was present at the agricultural conventions held ten days ago, will agree with us that there was a larger attendance and a greater show of definite purpose than ever before. Many new faces were discernable, and there was no falling off of the older men. These meetings and the work done at them were strongly in the line of agricultural advancement. Such was the opinion of the able visitors from the East and South who did so much by their presence and teaching to make those meetings attractive and profitable. The presence of Prof. Henry, from Wisconsin, was both noteworthy and suggestive. He is comparatively a young man, yet represents a period of wonderful advance, not only in agricultural science and practice, but in the appreciation of that knowledge by those whom his teaching and influence are designed to benefit. In the 20 years of his connection with the station at the head of which he now stands, he has been a leading factor in the production of the change of public sentiment toward the agricultural college and its work. When he started, it was difficult to induce a few students to spend time and money trying to learn what there seemed no apparent advantage from knowing. For a farmer's son to become a lawyer, doctor or engineer was a ready opening to worldly advancement and profit. To spend years of study and then go back to the farm was like burying one's talent in the earth. To-day those learned professions are over-crowded, and after long years of arduous preparation, aspirants in all of them are scrambling with each other for the chance to begin earning a living.

Over against this Professor Henry sets the fact that room in his agricultural classes cannot be found for all the students who apply for admission, and those students cannot be trained fast enough to meet the demand for their services from every corner of the Union. The teaching furnished these young men from the farms is both scientific and practical. And its real value is best attested by the continu-

A "WANT, SALE AND EXCHANGE" COLUMN.

In response to various requests, The Nor'-West Farmer has decided to open in the next issue a column for small transient advertisements, such as farms for sale and exchange, farm help wanted, farm machinery for sale or exchange, and other advertising of a miscellaneous character. We believe that many thousands of dollars could be saved yearly to our farmers by advertising their wants, and what they have for sale or exchange, in a simple, cheap way. Many things can be profitably advertised in this way which would not have any margin if advertised in the usual way. If you have anything for sale or exchange, or want to buy, let the readers of The Farmer know it.

Circulating, as The Farmer does, so very widely among the farmers and ranch-



ous appreciation it receives from the employers who have engaged the men so qualified.

Professor Henry is only one of many competent witnesses to the prospective advantage of familiarity with enlightened methods of modern agriculture. Only the other day Superintendent Creelman, of the Ontario Farmers' Institutes, pointed out how terribly over-crowded every profession in Canada is now, and competition getting keener every day. He knows lawyers in Toronto who would be glad of a clerkship at \$400 to \$600 a year, and 500 medical students wanted to enlist for service as soldiers in South Africa because those already in the profession cannot get half a living. Only the other day there were 72 applicants to fill a vacancy as assistant in a school, with a \$200 salary. He was glad to report that their College of Agriculture at Guelph is crowded, and frequent openings ready for qualified students at good salaries.

We emphasize the opinions of these two eminent authorities now, because it is high time that greater attention should be given to the desirability of having at no distant date a school of agriculture suited to the conditions and requirements of Manitoba and the Territories. In Winnipeg alone there are to-day more students of theology, medicine and law than the country will need for many years to come, yet our expenditures for these studies, in the maintenance of colleges and pay of professors, is ungrudging, while agriculture, our main industry, is learned in a haphazard and primitive way by young men who, with the aid of suitable professors and the stimulus of competition with ambitious fellow students, could in a few years add to their present practical experience such an amount of skill and scientific acquaintance with their business as would make them examples of ability and success wherever they may take hold.

Agriculture in all its branches is an art that can to a large extent be learned on the farm itself better than anywhere else. But the learning must not end there. The scientific as well as the practical side must be learned, and one able professor of animal husbandry can teach a big class of students more in a week inside a classroom than the smartest of them could pick up in six months without such help. What is wanted for every farm boy in the West is the opportunity in his growing manhood of getting to know in the readiest possible way what the best men in the field have found out, and can be got to teach whenever we have good sense enough to see its value, and make the necessary provision for getting it properly taught.

WHEAT TRANSPORT FOR NOTHING.

In last issue of The Farmer, attention was drawn to the cheapness of water transport for such bulky commodities as wheat. A still cheaper mode of transit has just been offered by Mr. Callaway, President of the New York Central Railway. The New York State Commissioners have been studying the Erie Canal problem, and it is certain that to deepen it to suit the requirements of modern navigation would cost \$60,000,000, perhaps a good deal more. And this mode of transport would only be available for part of the year. No canal at that latitude could ever be kept open in winter. At this stage Mr. Callaway steps in, and says his company will undertake, for the interest on that estimated cost, to carry free of cost all the wheat offered them. That railroad has already been carrying wheat in competition with the canals at the won-

derfully low rate of 2½ cents a bushel from Buffalo to New York, though it has always been held that the lowest rate got by the railroads was 2½ cents. The calculation is that the \$2,500,000, or thereabouts, of interest on the cost of the canal, if given to the railroad, would pay quite as much as it now gets in competition with the canal.

The project of the Connor's Syndicate to make Montreal a great wheat-shipping centre for routes converging there from the Northwest, is another interesting prospect for wheat growers west of the lakes. Looking to what has been already achieved in the way of bulk transportation, such schemes are not to be looked on as visionary. Less than 30 years ago James Holes, now one of the best-known farmers of the Fargo district, paid 30 cents a bushel for railroad freight from Fargo to Duluth. It now costs 8½ cents, and could be carried for 5 cents on the same road. The future has possibilities few of us can now forecast.

—The Ontario Government has set apart 2,000,000 acres as a forest reserve. It contains much good pine, and will be very valuable 20 years from now.

—The list of farmers who are to get free bulls from the C.P.R. is now about completed and notification will be sent to the fortunate men in a few days. This will put an end to the uncertainty among applicants and compel them to look to the ordinary market for the supply of what they want.

—An old country exchange says that Mr. Peterson, well known in connection with negotiations for fast steamers sailing out of Montreal, has a project in hand for carrying wheat by way of Quebec direct from Fort William and through to British markets on vessels suited to the draft of the Canadian canals.

—The Elevator Commissioners have completed their labors, and their report will be in the hands of the Minister of the Interior in a day or two. One of their recommendations will be that the Inspector at Winnipeg will define the amount of dockage on cars; another that a Government weighmaster be put on at Fort William.

—If you read nothing else in this issue, be sure and read Professor Henry's address on "Agricultural Education." When you have read it, set about getting an agricultural college established in Manitoba. This great Western country, with peculiar soil and conditions, needs it—must have it if it is to attain to its full measure of prosperity.

—The resolution passed by the Western Horticultural Society in favor of free importation of desirable fruit trees from the south is one with which The Farmer very strongly sympathises. For twenty-five years we have been throwing away money on Eastern nursery stock. Minnesota and Wisconsin have the very thing we want. Why should we not have it at once?

—On Feb. 27th the old settlers of the Carberry Plain held a big celebration in which the experiences of twenty years ago were gleefully recalled. Nowhere in the west can such a strong body of old timers be collected as on the Big Plain and the most interesting feature of the turn-out is the wonderful contrast between the conditions of that not very far off past and the solid prosperity of to-day. It has not been all sunshine, times have occasionally looked very blue, but persevering industry has

had its full reward. May these cheery veterans have many more such hearty gatherings and may their shadows never grow less. Elkhorn is also to have its old timers' society and more may follow.

—Messrs. Wm. Motherwell, Abernethy, and McArthur, Moosomin, came into the city last week to interview the railway management as to the possibility of building a railroad along the north side of the Qu'Appelle River. In the districts represented by these gentlemen the waste of labor in hauling out their grain to the C.P.R. is enormous. Mr. Motherwell has 20 miles to draw his and across the deep valley of the Qu'Appelle, where 50 bushels is the largest load he can take. Twenty miles and return, means forty miles for every fifty bushels marketed, or four-fifths of a mile for each bushel. For a 5,000 bushel crop this means 4,000 miles of travel. Or to market his grain he has to put a team and man on the road, furnish them with feed and let them travel 4,000 miles.

Look over the advertisements of seedsmen in this issue. Send for their respective catalogues. They are free for the asking, when you tell them that you saw their advt. in The Farmer.

WHAT CREAM SEPARATOR SHALL I BUY ?

Many a farmer is pondering this very question just now in preparation for spring, when his cows will freshen and be will have a heavy flow of milk. It is a question that will bear a good deal of study, as it is just as necessary for him to know the good and bad points of a cream separator as of a binder or other farm implement. In this advanced age, when science has been utilized so much in constructing machinery and close competition compels every man to take advantage of all the waste possible, it is wisdom on the part of a farmer to buy the very best separator he can find. In other lines of goods every one knows that the lowest priced is not the best to buy nor the cheapest in the long run. The same rule applies to cream separators, yet when asked which one be will buy, many a man, unless he has made a study of them, will say the cheapest. This we think a great mistake. Perfection is not attained in the machine which costs the least money, either in cream separators or other farm implements. It can be set down as a safe rule to go by that the lower the first cost of a machine the sooner will follow, as a general thing, its deterioration in value. The finer and more delicate the working parts, the more rapidly will this deterioration take place.

Therefore, in a machine so finely constructed and so truly balanced as it is necessary for a cream separator to be, the main features should be durability of construction, thoroughness of work and ease and smoothness of operation. Remember, your separator will be in operation 365 days in the year, so you want a durable one. Some of the manufacturers of cream separators, in their desire to place a cheap machine on the market, have neglected the durable qualities, which after all are essential ones, as a machine whose working parts soon get out of order is likely to prove an expensive luxury rather than a profitable investment in the long run.

Another point well worth considering when buying a cream separator is its ability to skim clean. When the hand separators were first introduced, 1 per cent., or 1 lb. of butter fat left in 1,000 lbs. of milk was considered clean work, but now there are machines on the market which along with their durability and ease of operation will skim so close as to leave only .02 per cent., or only one-fifth lb. in 1,000 lbs. of milk; others will leave a half to 1 lb. more. It is important to get a close skimmer.

Another point that must be considered. Some separators are very cranky, i.e., they will do good work only when operated under certain conditions. If these are not just right losses will occur. As conditions will vary from season to season in any dairy, it is well, and the only right way, to have a thorough test of any machine under varying conditions likely to be met with before purchasing.

NEW SEED.

Seed time will soon be here and the question of the best and purest seed to use should be receiving attention from our readers. The address last spring, on the importance of seed selection, by Professor Robertson, should be remembered and new seeds chosen with great care, because a certain measure of your success will depend upon the choice of seed made. Weed pests cause a serious loss and in purchasing new seed too great care cannot be taken to secure clean seed. In this issue of The Farmer, on pages 194 to 200 will be found a full copy of the seed catalogue of the Brandon Seed House, well known for their reliable seeds. This catalogue will be of use to you and it should be kept for reference. When ordering seeds, kindly mention The Nor'-West Farmer.

Market Review.

Winnipeg, March 7th, 1900.

Business in the country is not as brisk as it might be owing in many cases to bad roads, but it is much better than it was in the beginning of the year, and each week will likely see an improvement. Business in the city is good, wholesale houses are busy and spring shipments are constantly moving out. This week J. H. Ashdown sent out a train load of 40 cars of hardware for his western trade. Many lines of goods continue to advance. Garden tools and seeds as well as farm implements will be higher this spring. Eighteen out of the twenty-two paper manufacturers in Canada have formed a combine and advanced the price of paper. Canadian cotton goods are advancing in price. Implement men complain that collections in the country are slow. Bank clearings for the month of February show an increase over last year of over half a million. Rates for money continue firm and the demand good.

Wheat.

The wheat trade is at present in what the sailors would call the "doldrums." Just after our last report was issued there was a break of 2 or 3 cents and we cannot report much improvement in the tone of the market since. On Feb. 20th we made Chicago May wheat 65c., after this the slump took place and to-day the close showed 65c., with a slight downward tendency. Fort William is quoted at 65c. to-day, but very little doing. The opening of navigation is now within measurable distance and holders do not care to quit at present figures. The world's markets do not show any tendency to greater liveliness. The visible supply for Canada and U.S. east of the Rocky Mountains was on Feb. 24th 53,445,000 bushels, as against 29,920,000 a year ago, which was considerably lower than the ordinary visible supply at date. Two years ago it was 34,088,000 bus., four years ago it was 64,089,000 bus.

The high quality of grain produced last season is still being sustained by the reports of local inspection, which for week ending March 3rd was as follows:—

Wheat—One hard, 156; two hard, 36; one Northern, 12; three hard, 23; one frosted, 3; two frosted, 3; rejected, 1, 3; rejected, 2, 4; no grade, 8; one White Fife, 2; three frosted, 1; condemned, 4.

Oats—One white, 1; two white, 14; two mixed, 13; feed, 3; rejected, 1.

Barley—No. 1 extra, 1; No. 3, 2. Total, 290 cars.

The inspection returns show an average inspection for Central Manitoba never before approached. From the boundary up to the M. & N. W. R. the great bulk of the wheat has gone 1 Hard or very near it. At some points in Southern Manitoba, where the soil is thin, the steady dry weather so favorable to the rest of the province, led to premature ripening and a lean and shrunken berry, but this defect was trifling when the quality of the great bulk of the crop is taken into account. In the Territories the outturn has not been equal to the quality of former seasons. Ripening was too much hurried in a good many places and the grade unequal. At a few points this defect was not manifest. Some very choice samples were got by the Territorial Government for the Paris Exposition, the Qu'Appelle valley showing up well. With better railroad facilities that valley would prove a choice field for the production of seed wheat for the southern market. The total yield for the Territories in 1899 was nearly 7,000,000 bus. from 365,000 acres, of which Central Assinibola gave the largest amount, with very gratifying average yield.

There were 3,300,000 bushels of wheat in store at Fort William on Feb. 26th, compared with 2,344,000 bushels a year ago. Stocks of wheat at Fort William, Port Arthur, Keewatin, Winnipeg and Interior country points were estimated approximately at 8,700,000 bushels, compared with about 8,600,000 bushels a year ago, and 4,600,000 bushels two years ago.

Oats.

Prices have not materially changed since last report. From 28 to 33c. is the range, according to quality. A choice seed lot from Edmonton has cost more and is well worth it. The success of the shipments made last year from the cast, as well as from Edmonton, has caused a movement of the same kind this year and it is hoped the C. P. R. will give a reduced rate on seed, the benefit to the country from last year's importations being so manifest. The Territories show 4,741,000 bus. last year from 130,400 acres, rather a low average when the yield at some good points is allowed for. Frost did a good deal to shorten the total yield.

Barley.

A merely nominal business doing, and prices unchanged.

Flour and Millfeed.

Flour.—Ogilvie's Hungarian patent, \$1.75; Glenora, \$1.65; Manitoba strong bakers, \$1.40; XXXX, \$1; Lake of the Woods patent, \$1.55; strong bakers, \$1.65; Medora, \$1.40; XXXX, \$1.20 per sack of 98 lbs. delivered in Winnipeg.

Millfeed is still short of the demand and bran is quoted \$12 to \$12.50, shorts, \$13.50. Ground corn, \$19; oil cake, \$27; mixed chop of oats and barley, \$20.

An interesting feature in the week's flour business is the order from the War Office to the Lake of the Woods Co. for 25,000 sacks of high grade flour for immediate shipment to South Africa. They have also made a smaller shipment to Natal for a commercial house in Durban.

Flaxseed.

At country points flax seed is worth by the load \$1.25 to \$1.30 per bushel.

Timothy and Brome Grass Seed.

Best grades of timothy seed run at about \$3. With the extended growth of Brome grass has come a decline in the price. It is not long since it retailed at 20c. a pound now it can be had for 15c., and in many cases for much less. In a wholesale way we know of one case where 10,000 lbs. were sold at the rate of 7c. a lb.

Horses.

It is reported that liberal purchases of horses have been made for the spring trade in Manitoba, supplies being brought in both from Ontario and the south. Prices will range higher than they did last spring. Good heavy work horses run from \$125 to \$175. Western horses of light weight run from about \$100 up, when broken to the halter.

Cattle.

Only sufficient cattle to meet the demands of the local market are moving out. The price paid is from 4c. to 4½c. An extra choice lot will tempt a higher price. Buyers are now out after stockers. The range of prices paid for yearlings is from \$12 to \$16, and for two-year-olds \$22 to \$23. The average price for yearlings runs about \$12 to \$13.

Dressed beef brings 6c. to 7c., according to quality, frozen beef brings about 1c. less. Veal brings 8c. to 9c.

Sheep.

Market is quiet, being supplied with frozen mutton. No live stuff is coming in. Dressed mutton brings 8c. to 9c.

Hogs.

Supplies are coming in somewhat more freely. The market still stands at 4½c. a pound live weight off the cars at Winnipeg. A real choice lot of hogs will bring a somewhat higher price here. In Ontario the hog market has taken a turn for the better and as high as 5½c. has been paid for No. 1 bacon hogs off the cars.

Dressed pork brings from 6c. to 6½c. for best weights. Owing to the advance in eastern hogs they cannot be laid down for what they can be bought for bere. Receipts are quite liberal.

Butter and Cheese.

Creamery.—Nothing doing, 24c. nominal price for it in Manitoba. Preparations are being made for next season's work at the creameries.

Dairy.—The demand is good for finest grades. Many shippers from country points lose heavily on their shipments through lack of neatness and attractiveness in doing up their butter. A little care would make them a cent, and often more, a pound. Nicely put up fresh prints or bricks are worth 22c., tubs and rolls 18c. to 20c. These are prices here, freight and commission must be deducted from these prices. Lower grades run from 14c. to 17c. In the east both dairy and creamery butter is somewhat scarce and prices are firm.

Cheese.—No change in Winnipeg market. In the east prices are advancing and it is reported that two eastern firms have a corner on cheese and that they can force up the price in England. On account of the high price, it is expected that considerable fodder cheese will be made this spring, in fact, the first of March will see several factories in operation.

Poultry and Eggs.

Poultry.—Turkeys are quoted at 11c. to 12c., chickens 11c., ducks 9c., and geese 10c.

Eggs.—Market firm as receipts have been light. Lined eggs are worth 16c., while fresh eggs are worth by the case 22c. delivered in the city. On the local market strictly fresh gathered eggs are worth 30c. to 35c. and in some cases as high as 40c. has been paid.

Hides.

The market has an easier feeling, 6½c. to 6¾c. for frozen hides, with a 5 lb. tare, is the going price. Inspected hides are worth 7½c. for No. 1.

BOLE'S COUGH CURE CURES COUGHS.



\$4.65 A \$25.00 WATCH

In appearance, and the best time keeper on the market. Double hunting case, stem wind and stem set, superbly engraved. Fitted with an American model jewelled movement. Take this out and send it to us with your name and address and we will send the watch to you by express for examination, you exam the watch at the express office and if it is represented as a good watch we will refund the money if it fails to cure.

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GRATEFUL

Distinguished everywhere for Delicacy of Flavor, Superior Quality, and Highly Nutritive Properties. Especially grateful and comforting to the nervous and dyspeptic. Sold only in 1-lb. tins, labelled JAMES EPPS & Co. Ltd., Homœopathic Chemists, London, Eng.

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TO CURE A COLD IN ONE DAY.

Take Laxative Bromo-Quinine Tablets. All Druggists refund the money if it fails to cure.

25c.

Live Stock Impounded, Lost, or Estry.

In this department we publish as full a list of the impounded, lost and stray stock of Western Canada as is available. Notice in one issue, not exceeding five lines of lost or stray stock is given free to any of our subscribers who forward information. Notices exceeding above mentioned length will be chargeable at the rate of 10 cents per line on all overplus matter. The list of impounded stock is compiled from reliable sources; lost stock is open to those whose stock has been lost and who wish to recover them; stray stock is open to those who have taken up stray stock and wish to find owners.

The following is a list of animals impounded, lost or stray since Feb. 20th issue:-

Impounded.

Beulah, Man.—One horse, color sorrel, about 12 years old, some white on right hind foot, over 16 hands high. One mare, color black, about 9 years old, over 16 hands high. Both have got shoes on front feet. Chas. M. Orr, 9, 15, 26.

Innisfail, Alta.—One cow, 3 years, brindle, a little white on both sides, broken horns. J. D. Lauder.

Lucas, Man.—Four horses—two color black, aged, and two color brown. One mare, color black, with stripe on face and lump on knee. One horse, color black and white, blind feet brown. One pony mare, color brown, with star on face. One mare, two years old, with star on face. Thos. Irwin, 23, 14, 25.

Macdonald, Man.—One pony mare, color black, small white spot on forehead and front right foot, and left hind foot white; also sucking colt, color brown, right hind foot white. D. McQuaig, s.e. qr. 17, 13, 7w.

Millbrook, Man.—Three pony colts—one a mare, color black, rising two years old, with white nose; one a mare, color brown, rising three years old; and one a mare, color light bay, with dark mane and tail, and dark stripe along back. F. Laurie, n.w. 27, 10, 6e.

Lost.

Blythfield, Man.—One broncho mare, aged, dark chestnut, white stripe on face, one white hind foot, branded X on fore shoulder, also some other numbers. J. F. Goldsborough, 25, 8, 1w.

Bowden, Alta.—One dark brown mare, age 9 years, branded J on left ribs, vented L J on left ribs, brand almost indistinct; also branded inverted V on left hip, saddle galls on back and left hind foot white. E. A. Shenfield, Sr.

Dauphin, Man.—Two working horses and a mare. One sorrel, with white face and white feet; one bay with heavy mane and tail; one mare, dark brown. Wm. Fee, 12, 24, 19.

Deloraine, Man.—One brown and white bull calf 11 months old. J. D. Hanson.

Edmonton, Alta.—One red steer, branded S 10 on left side in two places. Wm. J. McKay.

Fishing Lake, Assa.—One red and white cow, dehorned, left hip broken, had red and white bull calf with her. \$5 reward. Robt. Reid.

Glenboro, Man.—One sorrel mare, branded Z on left hip, unbroken. Reward. Ed. Sweet, 32, 8, 13.

Hamiota, Man.—Two sorrel mares, one with white face, both with two heavy leather head stalls. \$25 reward. Edward Burr.

Hargrave, Man.—One bay mare, in foal, weight about 1,200 lbs., slightly lame on right front foot, branded N S on left shoulder. \$10 reward. W. McLelland, 26, 11, 27.

Kinistino, Sask.—One red heifer (dehorned), 2 years old past, branded D F on right hip. D. R. Freeman.

Knee Hill Valley, Alta.—One bay horse, white face, branded M with 3 under on left hip, fondered; one year old sorrel colt, white face, branded L V on left hip; one year old sorrel filly, brand indistinct. \$2 reward for each animal. H. W. Hunt.

Lako Clementi, Man.—On Jan. 29th, three western horses, one chestnut horse, 4 years old; one dark bay horse, 4 years; one light bay mare, 7 years old, about 1,000 lbs. each. Liberal reward. Jas. Davidson.

Macdonald, Man.—One bay pony mare, white stripe on face, sbod all around; also spotted pony mare. J. N. Caskey, n.e. qr. 30, 12, 7.

Macleod, Alta.—One brown gelding, aged, height 16-2, branded N P and 6 on left shoulder. Supposed to be in Manitoba or the north. \$15 for information. Walter A. Jackson.

Saltcoats, Assa.—One bay mare, rising four, four white feet, one eye with half the lase torn off the upper lid; one dark bay blood mare, rising three, light boned, tall and rangy. Strayed from Crescent Lake in the sprng of 1899. \$10 reward. Andrew H. Murray.

Stonewall, Man.—Strayed from Stonewall last June, large dark bay horse, 5 years old, white star on forehead, small white stripe, 4 or 5 inches, down face, one white hind foot; one chestnut mare, 7 years old, four white legs and white face. \$25 reward. Hugh McCullough.

Tetlock, Assa.—Small yearling red steer, white spot on forehead and flank, branded 4VP on right ribs, may be indistinct. J. Williams.

Waghorn, Alta.—One white faced heifer, coming two; one red heifer same age, both indistinct.

tintly branded T 9 V on right hip; one red and white yearling steer, branded 9 L P. E. Bourne.

Estry.

Batoche, Sask.—One cow, 3 years, red with white spots. Patrice Pareteau.

Battleford, Sask.—One cow, red, with little white, left horn gone, right born partly gone. A. H. Speers.

Cairnuff, Assa.—One mare, bay, white star on face and one on nose, hind feet white; one bruse, dark bay. James McCannell.

Devil's Lake, Assa.—One roan cow, about four years old, no brand, with black caif. A. White.

Fishing Lake, Assa.—One heifer, 2 years, red, traces of a brand on the left hip. J. E. Inge, 23, 12, 99w2.

Fletcwoode, Assa.—One heifer, red, with white spots on side, large star on forehead, polled. Thomas Huckerby, 8, 11, 3w2.

Flett's Springs, Assa.—One light red steer, one year old, one white spot on right flank, white underneath. J. B. Lancot.

Fort Qu'Appelle, Assa.—One steer, 2 years, bridle, white on flank. J. E. Jobson, File Hills, 16, 24, 12.

Fort Saskatchewan, Alta.—One mare, bay, small white stripe on face, three small saddle marks, left hind foot white, weight about 1,000 lbs., branded K on left shoulder. William Simmons.

Fort Qu'Appelle, Assa.—One cow, bridle, polled, red and white steer calf at foot. Frank Esenmon, Sioux Reserve.

Gainsborough, Assa.—One mare, bronco, chestnut, white face, white on shoulder, white hind feet; one mare, bronco, chestnut, with hair. Reynolds Bros., 1, 2, 30w1.

Gilbert Plains, Man.—One steer, one year and ten months old. Sam Mitchell.

Hayward, Assa.—Since December 1st, one steer, 1 year, light roan, small; one steer, 2 years, red and white, staggy, branded on left ribs BH8. Wm. M. Thomson, 30, 23, 13w2.

Lacombe, Alta.—Since August, 1899, mare about 1 years, brown, with white face, white right hind foot. James Haydon, 20, 40, 26w4.

Lacombe, Alta.—Since October, 1899, one cow, red and white, star on forehead, bob-tailed, branded circle H on left hip, branded bar on right hip, polled. J. W. Paisley.

Lebret, Assa.—One heifer, 2 years, red, white tail, branded U on left hip. Basil Mosonee, File Hills Agency.

Logan, Alta.—One mare, sorrel, cropped ears, branded circle on left hip, colt at foot; mare, 3 years, dark brown, white forehead. James Noran, 30, 51, 18w4.

Neudorf, Assa.—Since November 15th, 1899, steer, 3 years, red and white, white forehead. Johan Heinrich.

Olds, Alta.—One steer, 2 years, red and white spotted, branded block V or U on left hip. L. Gilmore.

Perley, Assa.—One mare, 9 years, dark grey, with black colt at foot. C. F. Highfield, 20, 22, 2w2.

Saskatoon, Sask.—One gelding, dark bay, a blaze on face, left front and hind feet white, weight about 1,000 lbs., branded EH on right hip. C. L. Hutchison, 14, 37, 6w3.

Stonewall, Man.—One light sorrel mare, three white legs, white face. D. McLean.

Strathcona, Alta.—One steer, 2 years, black; one heifer, 2 years, black. A. G. McLeod, 16, 51, 25w4.

Summer, Assa.—One stallion, 3 years, bay, white spot on face, right hind foot white. W. F. Green, 2, 20, 2w2.

Tetlock, Assa.—One heifer, 3 years, red with a little white, slit in left ear. James Williams, Crooked Hill Creek.

Wetaskiwin, Alta.—One cow, red, small white spot on forehead, piece out of left ear, branded PC on left ribs. Wm. Ruttle.

Wetaskiwin, Alta.—One steer, two years, red and white, one broken horn. Antoine Fontaine.

Weyburn, Assa.—One broncho gelding, 10 years, bay, white stripe on face, one white foot, weight 900 lbs.; one broncho gelding, 13 years, brown, stripe on face, three white feet, weight 900 lbs. Dan Pretty.

White Sand, Assa.—One cow, 4 years, roan, with black calf. A. White, Devil's Lake.

Wolseley, Assa.—One mare, bay, small star on forehead, slight stripe to nose and patch of white on nose, forelock cut, one hind foot white, paces when moving in band; one filly, 2 years, bay, tail and mane has been cut. Indian Gus, Assiniboine Agency.

Yorkton, Assa.—One steer, yearling, red with white spots. John Pollock.

Yorkton, Assa.—One cow, 14 years, strip over shoulders, branded XIX on left ribs. John Pollock.

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The practice of the veterinary profession in Manitoba by any other person is in direct contravention of the statute and renders him liable for prosecution

FRED. TORRANCE, REGISTRAR

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While our columns are always open for the discussion of any relevant subject, we do not necessarily endorse the opinions of all contributors. Correspondents will kindly write on one side of the sheet only and in every case give the name—not necessarily for publication, but as a guarantee of good faith. All correspondence will be subject to revision.

Linseed Oil Mill.

Subscriber, Katespe, Man.: "Can you tell me if there are any linseed cake mills in the country where they manufacture linseed oil, and can it be bought by the barrel?"

Answer.—Body & Neakes have a linseed cake mill in Winnipeg, but their oil is sold only to the jobbers in a wholesale way.

Sub-Surface Packer.

On page 145 of our Feb. 20th issue, appears an enquiry re the sub-surface packer. We have since learned that Sam Martin, Rounthwaite, has used one with gratifying success. Land treated by it held moisture well and the crop made very satisfactory returns in spite of drought at one stage of its growth. Mr. Martin is one of the best qualified farmers we know as a judge of farm machinery and if he backs this, "it is a go."

Mixed Farming.

A Carnduff correspondent calls attention to the neglect of gardenlark and hog raising in South Eastern Assiniboina. At the last fall show only the commonest kinds of vegetables were exhibited. The quality of these was excellent, but in more refined garden produce very little was shown. We cannot, in our crowded columns, find space for his letter in full, but quite agree that in many cases swine and garden produce should have more attention than is now the case.

Irrigation.

G. R. W., Wawanesa, Man. "It is very unlikely that irrigation will find a place in Manitoba with our present system of farming. By careful cultivation such land as yours may be worked even in a moderately dry season so as to hold all the moisture needed for a crop, of wheat especially. Study the possibilities along that line before you think of irrigation. If your land has sufficient fall to carry water, the usual plan of flooding land is to run furrows to carry the water over the land. If, however, there is not fall enough for this the task is a more difficult and expensive one."

To Put Water Into Barn.

A Constant Reader, Newdale, Man.: "I have a windmill on my barn, and 75 feet away is my well, which is 23 feet deep and contains a constant supply of 14 feet of water. I intend to put an underground pipe from well to stables, and to use wind power to force water into a tank in the stables. I would like to get advice through your columns, from any one who has had experience in pumping water that distance as to how deep I will have to place my pipes, and which is the best kind of pump to use; or I would like to hear from anyone who has had experience with a stuffing box, as to which is the best, a pump or a stuffing box."

Veterinary Book—Canadian Herd Book.

J. Thurber, Calgary, Alta.: "Which is the best veterinary book, adapted for this country, on sick animals, principally cattle. Also can you give me any information as to whom to apply for the Canadian Herd Book?"

Answer.—Get from the Department of Agriculture, Washington, U.S., "The Special Report on Cattle Diseases." Failing that, get "Law's Veterinary Advisor," which can be had from this office for \$3. By the Canadian Herd Book we presume you mean the French Canadian book. Dr. J. A. Couture, 49 Garden St., Quebec, Que., is the secretary.

Dairy Cheese.

Referring to "Cheesemaker's" letter in Feb. 20th issue, C. C. Macdonald says: "This kind of cheesemaking has never been taught in the Dairy School, and the people who make the kind of cheese he objects to have never come to take lessons there. The 'Cheese Dealer' who buys anything a half taught man can turn out is the only man to blame. These dealers have taken all such cheese regardless of quality and so long as money can be got for what they turn out, regardless of its faults, the makers of inferior cheese will go on in the old rut. Pay good value for the best and refuse to buy inferior stuff and the trouble will be cured."

Cultivation Question.

Subscriber, Bellegarde, Assa.: "Which is best for land with good depth of black soil and clay subsoil? Breaklog and backsetting or breaking deep and then using the disc harrow?"

Answer.—This can only be settled satisfactorily by actual test. We strongly favor the old style, break in May, shallow, about 2 inches, backset in Aug. to about 4 inches, and disc till fine enough for your purpose. Try a little the other way and so test the value of our advice.

On School Lands.

W. S., Maskawata, Man.: "I heartily agree with the letter of S. B. Hilton, in your Feb. 5th issue, concerning school lands, for we have a half section here that we get no taxes from. I admit it has been a benefit to two men, but an injury to eight men,—for it is a splendid gopher ranch. Now, I claim if the government had given that land to two men twelve years ago, and these eight farmers had given me the crop tho' gophers have destroyed, I could buy one quarter by this time."

Feather Eating.

A. B. C., Boisvain, Man.: "Can you tell me why hens eat feathers and what will prevent them doing it?"

Answer.—It is agreed by poultry experts that the want of animal food in winter is the principal cause. When poultry can get insects there are no such faults. Try to get butcher's scraps or fresh cut green bone and feed along with their other diet. Feeding in that way will prevent them acquiring the habit. Once got it can hardly be broken off. Change the diet if possible and make them scratch for all the grain they get. Exercise—something to keep them busy—will break off the habit.

A Scalding Trough.

Jno. Dash, Hillesden, Assa.: "In answer to S. F. Burgess, Seeburn, Man., I send you my plan. I use a snow melter made as follows, of sheet iron. I make a bottomless box of 2 in. plank, 6 ft. long, 2 ft. wide and 12 inches deep. The bottom is made of sheet iron nailed on to the frame. I build a fire place of stone the proper size to set this pan on. At one side I build a bench level with the top of the pan. From this bench I put a pig into the pan and take him out when scalded. The water must be deep enough in the pan to cover the pig so that he will be scalded all over at once."

Successful With Wind Power.

J. R. C., Sidney, Man.: "I notice question re the best power for a farmer. I think there is no power so good as a windmill, because it is always out of the way, ready for use, and you do not have to harness horses. I do not agree with the Oak Lake farmer, for I can name a score of farmers who testify to the usefulness of wind power for crushing grain, cutting feed, sawing wood and pumping water. I know for a fact that if a man has room enough to hold grain he can crush for 100 head of stock easily. I have done custom work with a 12 ft. mill for quite a large district, but we use a very large hopper."

The North West Elevator Association.

To Enquirer, Assa.: "The above named association has its office in the Grain Exchange, Winnipeg. We are not aware of any other association of the same nature and don't believe there is any such. The officers are Wm. Martin, president; Robt. Muir, vice-president; and J. A. Thompson, sec-treas. Its membership is composed of men who own and operate one or more grain buildings or are members of an elevator company. It has a printed constitution and if you wish further information your proper course is to apply to the secretary."

Remedy for Lice.

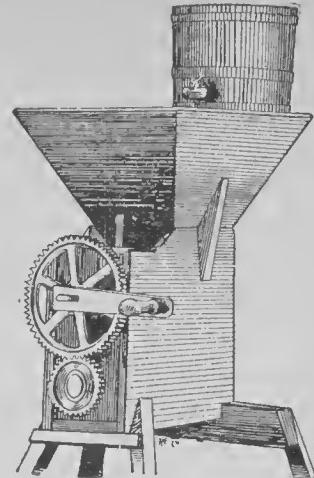
Thos. Daly, Strathcona, Alta.: "In your issue of Feb. 5th, on page 82, I notice a cure for lice on stock by an old Scotchwoman, in which pork water is put on according to instructions. I would like somebody to try my plan and report on it. I had a coit which was very lousy in 1899. I got some coal oil and put a couple of cupfuls of butter milk in it. I then took a hair brush and put it on as whitewash, brushing it in till it wet the skin. The philosophy of the Scotchwoman's cure was that it filled up the breathing holes, but this must have shut their wind pipe off in a hurry, one dose being enough, and he lost no hair either."

Grain Storage In Stone Barns.

W. A. Card, Glenboro, Man.: "I propose building a stone granary this coming summer. Should like to have the experience of any one that has stored grain inside stone walls and on a concrete floor. Are they free enough from damp to make them safe for such a purpose?"

Answer.—We shall be glad of any experience that will throw light on this subject. Meanwhile we may point out that in certain conditions of the atmosphere the moisture of the air will condense on the face of such walls and run down. But ventilation will modify the trouble to some extent.

A Machine for Pickling Wheat and other Grains.



As grain which contains smut is unfit for seed, and must be treated with a solution of Bluestone or Formalin to destroy the growth of fungi before it can be used for seed purposes, I claim that my invention facilitates the treatment of the grain with this solution in a thorough, complete and satisfactory manner. It is no experiment—a tried machine of three seasons. It has a double screw, one passing the grain through, the other bringing it back, thereby insuring the treatment of every berry. No other machine on the market has a double screw. Capacity 40 bus. per hour. Write for further information and prices to

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For Time Table folders, giving information in detail or for descriptive circulars, address

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Early Breaking.

T. C. Sparling, Myrtle, Man.: "I would like to hear from some of our experienced farmers re breaking first thing in the spring and backsetting about the 1st of June, and sowing with harley. The land is a nice soft black loam."

Answer.—Almost universal experience has shown that for wheat the only satisfactory course is to break early, haxset in August and sow next spring. The course you propose may suit where the soil is a little open so far as a crop of barley is concerned, and it is possible the first sod may get rotted enough to do for wheat next year. Only a small patch can be treated in this way, and with a fairly moist spell of June weather it may come out all right. No harm in trying it on a small scale. Can any one give further pointers?

Pin in Her Heart.

C. H. B., Kenias, Assa.: "For the benefit of M. W. Pumas, who reports the sudden death of a cow which he thinks was caused by a nail in the heart. Early last fall I had a cow take sick, she lingered along for about three weeks, then died, she suffered much and seemed to have convulsions. I thought she was going into quick consumption. I had her examined after death by two veterinarians. They found her heart enlarged and inflamed and at the first cut of the knife it came in contact with a piece of wire about five inches long, pointed at one end, with what looked like thread on the other end. It looked like a hat pin without the head. A young lady lost a hat pin in the milking yard last summer, and I am forced to believe that that cow licked up and swallowed that pin. I was relieved to know the cause of death."

Formalin Successful.

Thos. Daly, Stratheona, Alta.: "B. A. T., Minnedosa, Man., wishes to know how formalin worked in the matter of preventing smut in oats. I may say that my experience with it has been very successful. I just steeped each bag five minutes. I used three bags, one in the barrel, one dripping and one filling. I got enough formalin to do, according to those professors' opinions, 23 acres. I measured out the water and put it in (as nearly as I can remember it was four and a half ounces to ten gallons of water) but it only soaked enough oats to do about 12 acres, but on that 12 acres you could not pick a dozen heads of smut. I used bluestone on the other 11 acres, but there were more smut heads in it, but not enough to raise a dust when threshing. I claim the formalin is better than bluestone for oats if it works like it did last year. I will try it again."

A Water Supply.

A. & G. Mutch, Lumsden, Assa.: "As we have a small ravine or deep slough running through our farm and can get water by digging from 5 to 8 ft. any place in the bottom of said ravine or slough, each well would supply water for about 20 to 25 head of stock. Now, we would like if any of your readers could inform us how to get a good supply of water at one place, there being a good fall for a water run. Could we get water to run by digging a drain, say one half mile, and using tile? Would tile lose water or g in?"

Answer.—This question could be best dealt with by skilful observation on the spot. The writer has collected water by using open-jointed pipes at the points of production, leading into a watertight box or chamber, then using cemented pipes till past the points where there was risk of leakage, then taking in more from the side when it could be got. By collecting where available into chambers and carrying the accumulated product to the point of delivery in a close pipe this case could be fully met.

How Poplars Grow.

H. Antiknap, Regina, Assa.: "I want to know why poplars will grow in clumps on the prairie if protected from fire. I laid in a line of poles last year, covering them with the plow and all grew, but want to get seed if it can be got. Shelter belts are very valuable and I want more of them. I gathered what I thought was seed, but could make nothing of it."

Answer.—The clumps you speak of are from seed scattered by the wind. You can see the white down in the air at the proper season, and our idea is that this down catches in the long grass, taking root where it finds favorable conditions. The seed you gathered might not be fertile. That is nature's way to spread poplars. Your way of cultivating a stripe and plowing in lines of live poles is one of the very best yet known for getting cheap poplars. They can also be grown from cuttings, say an inch thick and eight inches long, stuck in where you want the trees to grow. We don't believe anybody tries to grow them from seed, and would be glad to hear from those who know any better plan than is here stated.

Brome Grass Seeding.

J. Fotheringham, Grenfell, Assa.: "Could you or some of your many subscribers let me know whether I can safely sow Brome grass seed with oats, say 2 bus. oats and 10 or 12 lbs. of the seed per acre. The Brome grass seed will not run

through the drill alone, and I wish to know whether the difficulty can be got over by mixing with oats. By sowing somewhat shallow the seed, I fancy, would come up all right."

Answer.—In this column will be found a letter from Mr. Mackay, of Indian Head, that covers most of the ground. The double difficulty of the lightness of the seed and limited rainfall, can only be met by trying to break up the seed by means of something that will help to spread it as Mr. Langrish does. A blend of rough sand and sawdust along with the seed might help. Summer fallow being moist should make the best seed bed, and as there is little chance of rain enough to carry along both oats and grass the best way is to save all the moisture for the grass by itself. Well put into damp soil 10 lbs. of sound Brome seed would make a better stand of grass than 25 lbs. put into ordinary dry spring plowing. If you do use oats let it be only half a bushel to the acre.

Opinions Wanted on Piggy Plan.

Stephen Benson, Neepawa, Man.: "As I propose building a new piggy, I would be pleased to receive correspondence and pointers from any of your subscribers in regard to my proposed plans. I expect to make the building of logs, and intend that it shall be octagon in shape, and about 40 feet wide. A space in the centre of the building will be devoted to the accommodation of a furnace and to the storing of feed, and from this centre room the feeding will also be done. The building will be divided into eight pens. I propose to use elevated sleeping places, with those for two adjoining pens on either side of the same partition, and the floor sloping to the other side of the pen, with door for cleaning out at or near the corner. In this way I would clean out two pens from the same door. I would put the windows opposite the sleeping places, so as to allow the pigs as much sunlight as possible. Of course the extreme passage would be made between two of the pens. I have thought that in the square pen the amount of trough room is over great for the pen space allowed, and this design will remedy that condition, as well as to be very handy for feeding, etc."

Experience With Disc Plows.

G. & B. Spring Rice, Gatesgarth, Pense: "In answer to R. C. Neish, Cannington Manor, re above, we bought one (a sulky) two years ago, and were so well pleased with it that last season we ordered two more, one being a gang, the other a sulky. Unfortunately, these could not be delivered until rather late in the season, and the weeds, consequently, had a very big start. We might mention that the land here is very heavy, and in wet seasons, like last year, we have to watch the weeds growing as it is (or was) impossible to get on the fields with plows. We now find that with the discs we can work when no other plow will do anything but clog up. The disc works admirably, especially in the matter of burying long weeds, and by its shape thoroughly sub-soils as well, but it requires to be run with plenty of power and considerably faster than an ordinary plow in order to make a really satisfactory job. Of course, the strike out furrows have to be made with a sulky of the old style. We use four horses on single disc and six on double, and find they are not any too many. I might add that we have a considerable quantity of land to fallow each year between three and five hundred acres, so that the advantages of being able to get on it early, and to continue working steadily, are of considerable importance."

Brome Grass, a Warning.

Angus Mackay, Experimental Farm, Indian Head, Assa.: "I am glad to notice, from time to time, farmers writing to The Nor'-West Farmer in favor of Brome grass, and observe in your last issue an article from Mr. Wm. Langrish, Oxbow, Assa., telling of his method of seeding and of the larger crop he obtained last year from this grass. Mr. Langrish's objection to broadcast seeding is well taken and if his invention will permit the seeding of this grass by drill, it will be a very great help to the successful growing of Brome grass.

"I think, however, that Mr. Langrish is astray on the point of advising the sowing of a nurse crop with the seed. The year before last, 1893, was a very wet one and there was ample moisture for both the oat crop and the young grass plants, and the fall of that year was particularly favorable to the grass plants after the grain was cut. The year just past, on account of the rain-fall in the autumn of 1893, and the abundance of moisture in the spring, was the best year for Brome grass since its introduction, and Mr. Langrish reaped the benefit; but two such seasons in succession, a wet summer and fall followed by a wet spring, may not occur again for some time and as a rule it will be found safer to sow Brome seed alone.

"There is no doubt, that if the seed can be sown by drill on well prepared fallow land, such as used by Mr. Langrish, and put deep enough to be safe from winds and not too deep to prevent proper germination, Brome seed and a nurse crop may succeed together, with our ordinary rainfall. With irrigation the two crops can be grown together with perfect safety, but I think the past two seasons have been as close an approach to irrigation as Assinibola is likely to have."

Wind Power is the Best.

One Who Has Had 10 Years' Experience: "I notice in The Farmer of Feb. 5th an article written by 'One Who Has Tried,' condemning wind power, for the simple reason that there was not wind enough around Oak Lake to drive a wind mill more than six days out of five weeks. I am sorry for this unfortunate writer that he is placed in such a forsaken part of the world where wind does not visit it any oftener than that. I have a wind mill just the same size as his (12 ft.), and I can crush any kind of grain, run a buzz saw for wood, a cutting box for straw, and have threshed oats with an open cylinder, and have had no trouble to do any of these things. 'One Who Has Tried' says he would not get a wind mill to run in connection with cattle and horse feeding, but he does not mention any other power as a substitute, perhaps he has come to the conclusion that it would be better not to attempt any other kind, fearing that it might be worse. No doubt this would be the case, as horse power would never fill the bill, unless there was a power house large enough to admit the horse power ready for work, so that the horses would be under cover while at work, as there are plenty of days that horses could not be put outside to work. As for steam, it would only be a humbug, the trouble of steaming up every day for an hour or two's work could never be a success. So I say stay with the wind power."

Favors Windmill Power.

Farmer: "In your issue of Feb. 5th complaint is made of the uncertainty of wind power in this country. I have used for 10 years a 12 ft. geared wind mill, have annually fattened a carload of cattle for spring market, and wintered an average of 30 head of cattle and horses, all stabled from fall till spring, and fed cut straw or cut oat sheaves. I never feed long food except occasionally to road horses, and though the wind did not blow strong enough every day to drive our cutting box, we never suffered any shortage. Simply used the power when it was going weather. We never had any trouble with grain crushing, as we used a large hopper holding 30 bags, and when not using the power for other purposes, turned it to crushing, running all the off hours and on to bed time if necessary."

"I think the wind mill the cheapest power the farmer can employ. The annual cost is about \$1 for oil, and we run 13 in. throat cutting box, 10 in. plate grain crusher, 26 in. circular saw, fanning mill, force pump to fill a 55 barrel zinc tank throwing water 40 ft. from pump, besides grindstone and grain picker. Is there any other possible power that will do such a variety of work for such a small cost? There are few winds in November and December, but by prudent management enough feed can be stored up to tide over the slack periods."

In Favor of Wind Power.

Broadlands, Ninette, Man.: "In the first place, it is the cheapest for the farmer's use. In the second, he can make inside work for the help by use of such a power when it is too stormy to be outside, and in the third, it is good for almost any work except that of fanning grain. I bought a windmill during the fall of 1898, and have crushed 1,000 bushels of grain for neighbors and about 1,000 or 1,200 bushels for myself, with two sets of burrs. One good thing is that your crusher is as good as new when the new burrs are put in. Last winter hay was scarce owing to railroad contractors buying all they could get for the construction of N. P. Ry. here, and so we had to fall back on cut straw, which we fed with bran to 30 head. The wheel is on a one-story granary, yet we managed to keep ahead of the needs in the feed cutting. If on a barn, so as to get a drop for cut stuff, we could cut such a supply as to never be out, even in a long calm. Who ever saw a calm for more than three days here? I say give me wind power for the farmer. It saves wood and pumps water, and only uses oil and an occasional bolt. It has its drawbacks, of course, but what has not? My wheel develops from four to six horse power, according to wind. The wheel, crusher (independent), pulleys and cutting box cost \$200."

Changing Seed Grain.

Jas. Dale, Grund, Man.: "Having noticed in your Feb. No. an article on changing seed grain, would state I started in 1886 with a medium sample of White Fife wheat and in five years I had so far improved it that whenever I showed it I took first prize. My plan was the following: I took about 100 bushels and cleaned out of it from 30 to 40 bushels, then sowed the balance in either backsetting or summerfallow (preferably backsetting). The result was a steady improvement. Two years ago I purchased seed from F. Frederickson, of Glenboro, he having obtained the seed about four years ago from Sintaluta, I think. This seed has improved since coming east, I carefully cleaned some of it extra, and the result was the same as before, a No. 1 sample of wheat. I intend following the same plan in the future. When I wish to improve my seed wheat I generally purchase from two to four bushels of the best and purest I can get from the best growers in the province. I find if I start right I have no trouble in improving and grading up from the start. The reason that I do not purchase more

Best Timber in Speight Wagons.

If you have no dealer convenient, write directly to us for information.

The Speight One-Beam Manitoba Bob-Sleigh

For general use in Manitoba, N. W. T. and northern part of Ontario. Furnished with regular bolsters; 38½, 40 or 42½ inches between stakes, or with log bunks and clevises.

2 in. Runner 2½ in. Steel or Cast Shoe 6 ft. long
 $\frac{2}{3}$ " " 2½ " " 6 "
 $\frac{3}{3}$ " " 3 " " 6 "

Improved with Cast Channel Shoe projecting on each side of runner, protecting the woods and bolts.

Whiffletrees, Doubletree and Neckyoke extra.

seed is that I wish to guard against noxious weed seed and with the above amount, after cleaning carefully, I am always safe. If this plan is followed I can see no reason for changing seed. The same rule applies equally to oats and barley."

Development of the North-West Territories.

A. Wyndham, Gladys, Alta.: "In the development of a new country the first thing necessary is to have the means to open it up and this without direct taxation of the early settlers. This, in the west, is impossible as long as our local government has no control of our natural wealth. Our lands, minerals, timber, etc., should all be used solely for the opening up and development of the country in which they are. The secret of British colonial success has been that she has allowed the people in new colonies to control and utilize all such wealth for the development of the country. We, unfortunately, are not a colony of Great Britain, but of the Dominion, who seem to think that whilst they reserve the wealth of the west for the benefit of the older provinces, which have been and are being built up out of their natural wealth, that we are to build up the west by direct taxation of ourselves for their benefit. A country that undertakes to form and support a colony must make sacrifices to succeed. England, even since the confederation of Canada, has annually spent not less than three millions in preparing for the defence of Canada. What have we given in return? She is receiving a little now. We Canadians cannot do too much. We are assisting in a small way to build up our own nation, a nation to belong to which is a glory, no matter where from."

A Case of Trespass.

R. A. P., Blythfield, Man.: "1. My neighbor's hens come into my garden and scratch it up. When I drive the hens away or set the dog on them the neighbor is annoyed. The garden has a wire fence around it, but the hens go under it and fly over it. A road allowance separates us. Would I be justified in shooting the hens? If so, what is to be done with the carcasses?"

"2. Is a neighbor allowed to corral his cattle at night on the road allowance in front of his farm buildings, when these buildings are directly opposite my place. The cattle lie around my gate, are in the way going in and out and keep the ground around the gate so dirty that it is impossible to open it without getting my shoes badly soiled. Can I compel him to keep them some other place at night? They run on the prairie during the day."

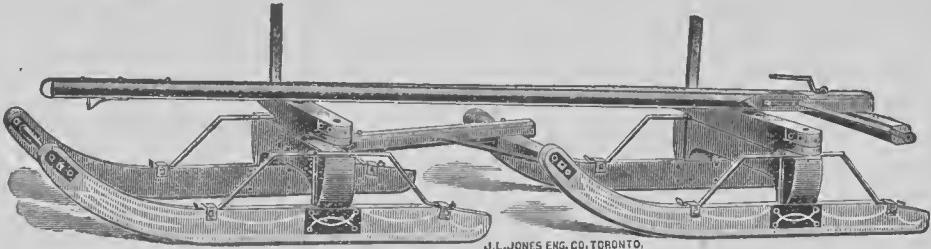
Answer.—1. In an extreme case you may shoot the fowls inside your garden and throw them over the fence.

2. He has no right to use the public right of way as a corral. The proper place is on his own land. Call the attention of the municipal council to this trespass, it is their business even more than yours.

A hogfish neighbor is a standing nuisance in a country like this, for even when he is in the wrong he may find ways of retaliating on you that you can neither prevent nor punish.

Milk and Grain for a Calf.

D. M., Whitewood, Assa.: "I keep about six cows and the plan I follow is to take the calf away as soon as licked dry and before it has sucked the cow. I feed it from the pail from the first and think it the better way, as both cow and calf are under control and the calf is not punished at weaning time. It certainly is a little more labor, but it pays because a good cow will give more milk than a calf requires. A few pigs can then be kept with the extra milk. Now, how much should each calf receive twice a day? I think a calf should have some meal when about a month old, say a few oats. Would whole oats do, or would something else be better? I think the calf should



THE SPEIGHT WAGON CO., Markham, Ont.

Dealers should write us for Catalogue and Prices.

not be allowed to run on the prairie in the sun. I would prefer to keep it in the stable when the flies are troublesome. In England where I came from they do not think that grass and milk together makes the best feed for raising calves."

Answer.—A calf's stomach is small and the first feed should be small, not more than two quarts at a time, but the calf should have at least three feeds a day. Some recommend only 10 lbs., or say a gallon, as the day's feed at first, increasing to 15 lbs. a day at the end of three weeks. The skim milk should not exceed 18 lbs. a day until the calf is five or six weeks old. Many calves are destroyed by being overfed with skim milk. It is mistaken kindness to increase the quantity of the milk to make up for it being skimmed. At from two to three weeks old the change should be made from whole to skim milk and a week should be taken to make it. A teaspoonful of oil meal converted to a jelly by adding boiling water is sufficient at first to make up for the lost fat. This should be increased gradually as the calf grows, to half a pound a day. Linseed meal or hoiled flax seed makes a good substitute. Oatmeal, shorts or other crushed grain, well boiled, have been found to give excellent results. Mrs. E. M. Jones, the well-known Jersey breeder, uses a great deal of good oatmeal well boiled. As soon as the calf is taught to lick meal, the grain ration may be fed in a little box, not feeding more than the calf will clean up between feeds. Keep increasing the quantity as the calf will take it. There is little danger of crowding the calf too fast, especially if intended for beef. A careful feeder can make a calf gain one pound to one and a half and two pounds a day for the first four months. Calves are frequently injured by being compelled to be out in the sun. Might almost as well put a young baby out in the sun. If nice green hay and a liberal ration of meal is provided you are likely to have a better calf in the stable than if run on the prairie.

Creamery Returns at Whitewood.

Director, Whitewood, Assa.: "If 'Patron' had signed his name to the above in issue of Feb. 5th, we farmers of Whitewood district would have been able to visit his place and see how he was able to reach the 250 to 300 lbs. of butter per cow, but his principal remarks were re tests of cream, and amount his neighbor lost by patronizing the creamery.

"1st. Patron's figures lead us to believe he withdrew after the eight tests given which the manager tells me is contrary to fact, and that after he told him about his separator his cream was more regular. I have run a separator for three years and I cannot always make the same amount of butter from a given amount of cream. All separators are set to give so much cream to the minute, and if your milk is rich in fat the cream will be thick to what it would with poor milk, as any man can prove by putting water through and seeing a flow from the cream spout, and it is a well known fact that cows vary from day to day in the amount of fat in milk. A cow under official test, having run from a little over 2 to 5 per cent. in the same week. One patron of the creamery told me he noticed a difference in his cream on his table, and remarked to his wife about it, and when his test came in they were low for that week. The manager had some trouble with samples, and we had to change the driver (this was not on route of 'Patron') and I am sorry to say some try to get the best of the creamery with the samples. This happens in other places as well as here. Some patrons claim to be able to churn more butter from one half hatch of cream to what they got from the creamery for the other half, but if it had been analyzed would it not have been of the same quality for fat, but full of water, casein, etc.?"

"2nd. His neighbor lost \$100, etc., say for the sake of argument, that the manager of the creamery took one-quarter of his butter by bad management or otherwise—an utter impossibility."

bility. Eight cows at \$100—\$12.50 per cow, multiplied by 4 is \$50 per cow, sold at the average price of 15c. to the store, would have been 333 lbs. per cow for six months (the time creamery was in operation), 8,300 lbs. of 4 per cent., or 10,000 lbs. 3 per cent. milk in the same time, which can not be done, under present conditions, with any cow in the Whitewood district.

"Previous to the creameries in Manitoba and the Territories hutter in the stores was 6c. per lb., and if the farmers get careless and have the creameries closed Ontario creamery hutter will fill the B. C. market and dairy butter would be down to the old price. The Whitewood creamery was at the head of list in the Territories for quantity in 1899, the directors are giving their services free and are large stock holders and will try to rectify any evils and satisfy the patrons if possible. The manager has been 20 years in Denmark, Ontario and the west making butter, and I believe is a careful manager, but farmers are suspicious of all millers, grain buyers, creamery and cheese managers because some of them are not just what they should be."

DAVIDSON'S PICKLER.

David Horn, Chief Grain Inspector at Winnipeg, says the quantity of smutty wheat that goes through his hands every year shows that the farmers of the West are terribly blind to their own best interests. They raise a great racket about unfair dockage and low grades, and go home to grow wheat in a way that robs themselves more in one year than the grain buyers can do in five. This in substance is the opinion of a man who has the very best means of knowing the truth of what he says. Nearly all the rejected wheat that has passed through his hands this season would have gone No. 1 hard hut for the smut balls in it. The street buyers take wheat as No. 1 hard that has smut balls in it and mix it with perfectly clean wheat, the whole going rejected by the man who cannot be cheated. And every year we hear of men who sowed what they were sure was perfectly clean wheat having smut balls in their crop. This is easily explained. Prof. Bolley, of Dakota, says the germs inside those smut balls are so fine that the best microscope fails to detect them, and the only sure cure is to pickle with bluestone or preferably formaldehyde. Davidson's Pickler is the best implement known for using these valuable preventives, the simplest and the cheapest. Buy it at once and save money on your next crop."

D. B. Macleod, general agent J. I. Case Threshing Machine Company, who, accompanied by A. E. May, Carberry, and C. Wahn, Gretna, has been on a visit to the Company's headquarters, Racine, Wis., has returned to Winnipeg, and reports a pleasant and satisfactory trip, Messrs. May and Wahn expressing themselves as simply astounded at the immensity of the Company's works and the thoroughness with which the smallest detail affecting the good quality of their goods was attended to. The factory is running full time and the Company are out to beat their record of 1899, which was a world beater. "Mac" has always a good word to say for The Nor'-West Farmer, and being questioned as to the value placed by the J. I. Case Co. on their advertisement in this paper, remarked, "We consider The Nor'-West Farmer a very necessary member of our staff, and wish it renewed success for 1900."

The Wawanesa Mutual Insurance Co., whose advertisement appears in this issue, have had a most successful year's business, the increase in business during 1899 was over \$1,800,000.00. The assets over liabilities on Jan. 15, 1900, were over \$43,000.00. The number of farmers members of this company is nearly 4,000. Reliable agents are wanted in every locality in Manitoba and the Territories. The head office is at Wawanesa, Manitoba.



Poultry Association of Manitoba.

The above Association held its seventh annual show Feb. 19th to 23rd, 1900, in Winnipeg. To say that the show was a good one would be putting it mildly. It was simply a grand success, both as to number and quality of entries as well as financially. If you were to tell a stranger, say one of our American cousins across the line, that Winnipeg and the Province of Manitoba were capable of getting together a show of between 900 and 1,000 birds, he would smile a superior smile, and give you to understand that he thought you were given to drawing the long-bow—in other words, magnifying facts. Of course, in a new Province like Manitoba, we do not expect to compete with such places as New York, Boston, St. Paul and Chicago in numbers, but we can safely say that there are just as good birds shown in Winnipeg as in these older cities. By actual count we had 942 birds, poultry and pigeons together, the heaviest class being Plymouth Rocks, closely followed by Wyandottes and Leghorns.

The Barred Rocks were splendid, the best ever seen here. Judge Butterfield said they were the best class of Barred Plymouth Rocks he had run across this winter, being very even in quality. There were 17 pens on exhibition, four more than at the great New York show. The White Rocks were also a very good even lot, the winners scoring well up in the nineties. Buffs good, but not very many on exhibition.

Wyandottes were a large class, and of very good quality. The Silvers made a nice lot, but hardly up to the mark of former years. Goldens were very few in number, but the winning cock, cockerel and pullet made up in quality, scoring 93 $\frac{1}{2}$ for cock, 94 $\frac{1}{2}$ cockerel and 93 $\frac{1}{2}$ pullet. The cockerel, in the judge's opinion, is the best all-round Golden Wyandotte he has seen this winter, being large, of fine color and in good shape. White Wyandottes very good, the winners going away up. A pen of these won the Lieutenant-Governor's challenge cup for best pen of Asiatic or American fowl. Blacks also good. Buffs made a great turn-out, being a nice even buff all through, and exciting the admiration of everyone who saw them. Buffs are rapidly coming to the front, and breeders of the older varieties will have to look to their laurels, or they will soon be distanced in the race for fame.

Light Brahmans made a nice class, not so many as usual, but every bird a good one. Only two or three Dark Brahmans were shown. Cochins made a fine display, especially Buffs and Partridge, the latter being grand in shape and markings, and well shown. Langshans a good class, the winners being top-notchers.

Dorkings were a small class, but good; also Javas, only Blacks being shown.

Leghorns made up a very large class, the Whites, Rose and Single-combs being the finest lot ever seen here. They were white as snow, and fine in shape, head points, and good yellow legs. Browns good, also Blacks and Buffs. Minorcas a nice lot, the winners being good shaped, big-bodied birds, and fine in cobs and color of plumage. They show a decided improvement over former years, for they are getting away from the Leghorn type which used to be seen so much.

Andalusians and Spanish were small classes, but away up in quality. Houdans were the only representatives in the French class, but these are steadily gaining ground in popularity, which is proved by there being no less than 35 specimens on exhibition. Scores ran pretty close, and honors were well divided among the several exhibitors.

Games made a fine lot, especially Indians, which appear to be getting popular. They are certainly a very strong, hardy-looking bird, and should do well in Manitoba. Polish were a small class, but good, only White-crested Blacks being shown. Hamburgs, a large class compared with other years, there being some grand Golden and Silver Spangled shown. Also a few Red Caps, very good ones too.

Bantams, about 160 entries all kinds, from Cochin and Brahma to B. B. Red Games. Sebrights and African were very good, and scored high. Pigeons—a good display of good ones.

A great attraction to the public lay in several pairs of Pheasants, Golden, Mongolian and Ring-necks.

Turkeys, both Bronze and White Holland, were well represented. There were some magnificent birds among them.

Geese also very good—Toulouse, Emden and Chinese being shown.

Ducks were represented by Pekin, Rouen and Indian Runners.

During show, Mr. and Mrs. Yuill, of Carleton Place, Ont., gave practical demonstration of the method of fattening poultry by means of the cramming machine, much in use in France and England. They had a coop of fowl, which they fed three times each day during show week, and on the last day killed and dressed them according to the style preferred in Manchester and Liverpool markets. Farmers visiting the show were greatly interested.

AWARDS.

Light Brahmans—Cock, 1st, H. A. Chadwick, St. James; 2, Newall Bros., Winnipeg; 3, L. Mitchell, Winnipeg. Hen, 1 and 3, Newall; 2, Chadwick. Cockerel, 1, Chadwick; 2, J. E. Kimberley, Routhwaite; 3, Newall. Pullet, 1, Kimberley; 2 and 3, Newall.

Dark Brahmans—Cock, 2, cockerel, 3, J. Kennedy, Winnipeg.

Buff Cochins—All awards to F. D. Blakely, Winnipeg.

Partridge Cochins—Cock, 1, W. Anderson, Brandon; 2, Chadwick; 3, A. E. Shether, Brandon. Hen, 1, Chadwick; 2, Shether; 3, Anderson. Cockerel, 1, Chadwick; 3, Emery & Bonnick, Winnipeg. Pullet, 1, Chadwick; 3, Emery & Bonnick.

Black Cochins—All to Anderson.

Black Langshans—Cock, 1, Chadwick. Hen, 1, Chadwick. Cockerel, 1, Chadwick; 3, J. Hillis, Winnipeg. Pullet, 1, Chadwick; 2, Hillis.

Black Javas—Hen, 1, J. Kitson, Macdonald; 2, C. Midwinter, Louise Bridge. Cockerel, 1, Kitson; 2, Midwinter. Pullet, 1, Midwinter.

Dorkings—All awards to Midwinter.

Barred Plymouth Rocks—Cock, 2, W. Rutherford, Winnipeg; 3, Kitson. Hen, 1, Chadwick; 2 and 3, J. Rothnie, Virden. Cockerel, 1, Chadwick; 2, Todd & Co., Winnipeg; 3, T. H. Chambers, Brandon. Pullet, 1, G. H. Grundy, Virden; 2, Munroe Bros., Winnipeg; 3, Mrs. Geo. Wood, Louise Bridge.

White Plymouth Rocks—Cock, 2, R. Dolhear, Winnipeg. Hen, 1, Dolbear; 2, W. H. Garside, Brandon; 3, Munroe. Cockerel, 1, Garside; 2, S. B. Blackhall, Winnipeg. Pullet, 1, Garside; 2, J. R. Henry, Chater; 3, Blackhall.

Buff Plymouth Rocks—Cock, 2, H. W. Balls, Portage la Prairie; 3, Todd & Co. Hen, 2, Balls. Cockerel, 3, Todd. Pullet, 1, Balls; 3, Todd & Co.

Silver Laced Wyandottes—Cock, 2, E. Brown, Boissevain; 3, Grundy. Hen, 1, Grundy; 2, A. J. Carter, Brandon; 3, S. J. Thompson, St. James. Cockerel, 1, Grundy; 2, Chambers; 3, Thompson. Pullet, 1, Thompson; 2, Brown; 3, Grundy.

Golden Laced Wyandottes—Cock, 1, T. Reid, Winnipeg; 2, W. A. Webb, Winnipeg. Cockerel, 1, S. Wise, Winnipeg; 2, Webb. Pullet, 1, Wise; 2, Reid.

White Wyandottes—Cock, 1, Kitson; 2, Geo. Wood, Louise Bridge. Hen, 1, Wood; 2, E. Coatsworth, Winnipeg; 3, J. Knowlton, Brandon. Cockerel, 1, 2, 3, Coatsworth. Pullet, 1, Brown; 2, Coatsworth; 3, Wood.

Buff Wyandottes—Cock, 1, R. J. Hinds, Winnipeg; 3, F. McArthur, Carman. Hen, 1, McArthur. Cockerel, 1, E. Fortier, Winnipeg; 2 and 3, McArthur. Pullet, 1, 2 and 3, McArthur.

Black Wyandottes—All awards to Geo. Wood.

Louise Bridge Poultry Yards

HEADQUARTERS FOR THOROUGHBREED POULTRY.

Barred Plymouth Rocks,

Single & Rose-comb White Leghorns,
White Wyandottes, Black Spanish.

My stock again carries off the lion's share of prizes, winning 20 firsts, 8 seconds, 2 thirds and numerous specials. Also exhibited five birds at St. Paul, Minn. show, winning three firsts, a fourth and two specials. The above record stands unequalled.

A few choice cockerels for sale.

Orders now booked for eggs at \$2.00 per 13.

Address—GEORGE WOOD,
Louise Bridge P.O., Winnipeg, Man.

Oak Grove Poultry Yards,

LOUISE BRIDGE P.O., WINNIPEG, MAN.

A few pair of young Pekin Ducks from imported and prize-winning stock, at \$4.00 per pair.

Fifty pair of my noted strain half wild Bronze Turkeys. Am breeding from two of as fine birds as there are in Manitoba.

I am sole agent for Manitoba and N.W.T. for GEO. ERTEL & CO.'S VICTOR INCUBATORS and BROODERS. These machines have copper tanks, moisture pans, thermometers, egg testers, egg turners, regulators and lamps. Everything is complete, and every machine goes out with a guarantee that it will do as represented or money will be refunded. Send for 1899 Circular.

Address—CHAS. MIDWINTER,
Louise Bridge P.O., Winnipeg.

G. H. GRUNDY VIRDEN MAN.

Breeder of high-class Box 688.

BARRED ROCKS, S.L. WYANDOTTES,
B.R. GAME BANTAMS.

My birds have taken first prizes at Winnipeg, Brandon and Virden exhibitions, and first for Barred Rock Cockerel at the Manitoba Poultry Show held at Brandon Feb. '99, exhibiting the highest scoring Barred Rock at this show in a class of 67 birds.

Young stock for sale. Eggs in season.

EGGS.

LIGHT BRAHMA } per
B.P. ROCKS } setting 1.50

S.C.W. LECHORNS } per
S.C. BLACK " } setting 1.00

Muffed Tumbler Pigeons for sale

Rev. J. E. KIMBERLEY,
Rounthwaite, Man.

25 YEARS A WINNER 25

If you want prize birds, White and Buff Rock, White and Brown Leghorns, and Black Mir orcas, **NOW IS YOUR CHANCE!** For 25 years I have taken more prizes in my classes than any other breeder in Canada. Toronto Industrial, 1899, 7 prizes and medal for best collection in W. Rocks; 9 prizes and medal for best collection in Leghorns. At the Ontario, 1900, I won more prizes and specials in my class than any other breeder. Eggs from strictly first-class pens, \$3 a setting. Reduction on a number of settings.

THOMAS RICE, Box 376, Whitby, Ont.

S. C. BROWN LEGHORNS ONLY

A fair field and no favor.

My birds won, Winnipeg, 1899, 2 1st, 1 2nd—two entries. Woodstock cock, 92 score, 1st; cock, 91 score, 2nd; cockerel, 95% score, 1st. Ingersoll, eight entries, won 4 1st, 3 2nd and 1 3rd. At the Ontario, 1900, Peterborough, 2nd and 3rd hens, 3rd pullet, 1st and Special for breeding pen.

Eggs \$1.50 per setting. Birds at all times for sale.

J. G. TAYLOR, Woodstock, Ont.

MINORCAS.

HOUDANS.

W. PYEANDOTTES.

PEKIN BANTAMS.

PEKIN DUCKS.

M. B. TURKEYS.

A few young stock of all varieties for sale, also young Gobblers from imp. 40 lb. Gobblers at \$2. each.

NORWOOD BRIDGE POULTRY YARDS, WINNIPEG.

WHITE PLYMOUTH ROCKS !!

If you want good birds, write for prices to

S. B. BLACKHALL,
696 McMicken St., Winnipeg.

B.P. ROCKS I have fine young stock of all varieties, from prize breeders. Prices right.

EMDEN GESES

AND

PEKIN DUCKS

S. McCURDY,

Carberry, Man.

When writing advertisers mention The Farmer.

Spanish—All to Wood.
Andalusians—Cock, 1, Wood. Hen, 1, Kennedy; 2 and 3, Anderson. Cockerel, 2, Kennedy. Pullet, 1, Kennedy; 2 and 3, Anderson.
Black Minorcas—Cock, 1, Midwinter. Hen, 1, Reid; 2, Chambers, 3, Riverview Poultry Yards. Cockerel, 1, Reid; 2, Riverview Poultry Yards; 3, Brown. Pullet, 1, Brown; 2, Midwinter; 3, Reid.

White Minorcas—2 hen, 1 cockerel, 1 and 2 pullet, J. Kennedy.

S. C. White Leghorns—All awards to George Wood, except 3 hen to Garside, and 3 pullet to A. Mitchell, Winnipeg.

R. C. White Leghorns—All to Geo. Wood, except 2 cockerel, 2 pullet, to J. Knowlton, Brandon.

S. C. Brown Leghorns—Cock, 3, A. Williams, Winnipeg. Hen, 1 and 2, Chambers; 3, Williams. Cockerel, 2, Chambers; 3, Williams. Pullet, 1 and 2, Chambers; 3, Williams.

R. C. Brown Leghorns—3 cock, 2 hen, Williams; 1 cockerel, Kennedy.

S. C. Black Leghorns—Cock, 1, J. E. Kimberley. Hen, 1, Hinds; 2, Kimberley. Cockerel, 1, Hinds. Pullet, 1 and 2, Hinds; 3, Kimberley.

S. C. Buff Leghorns—Hen, 2, J. A. King; 3, Balls. Cockerel, 1, Balls; 2, J. M. Johnson, Winnipeg. Pullet, 1 and 3, King; 2, Balls.

B. B. Red Games—Cock, 1, J. A. Mullen, Cypress River. Hen, 1 and 3, Mullen; 2, Kennedy. Cockerel, 3, Walker. Pullet, 2, Mullen.

Brown Red Games—All to Mullen.

Pile Games—1 hen, W. Anderson. Duckwing Games—Cock, 1, Balls. Hen, 1, Mullen; 2 and 3, Aldritt, Winnipeg.

Indian Games—Cock, 2, Balls. Hen, 1 and 2, Chambers; 3, Mullen. Cockerel, 1 and 3, Walker; 2, Chambers. Pullet, 1, Garside; 2, Chambers; 3, Walker Bros.

A. O. V. Game—Cock, 1, Mullen; 2, Anderson. Hen, 1, Mullen; 2, Anderson. Cockerel, 1, Mullen. Pullet, 1 and 2, Mullen.

S. Spangled Hamburgs—Cock, 1, J. F. McLean, Brandon. Hen, 1 and 2, McLean; 3, W. Lees, Winnipeg. Cockerel, 2, Hinds; 3, McLean. Pullet, 1 and 3, Lees; 2, McLean.

S. Pencilled Hamburgs—All to M. & W. Cordingley, Winnipeg.

G. Spangled Hamburgs—Cock, 1, McLean; 3, Todd. Hen, 1, Todd; 2 and 3, McLean. Cockerel, 1 and 3, McLean.

G. Pencilled Hamburgs—Cockerel, 1, J. Kennedy.

Black Hamburgs—1 and 2 hen, 1 and 2 pullet, Chambers; 3 hen, 3 pullet, Kennedy.

W. Crested Black Polish—Cock, 1, McLean. Hen, 1, Wise; 2 and 3, McLean. Cockerel, 3, Hinds. Pullet, 1, Hinds; 2, McLean.

Golden Bearded Polish—Hen, 1, Chambers. Houdans—Cock, 1, Wise; 2, Midwinter. Hen, 1, Midwinter; 2, Wise; 3, J. Wilding. Cockerel, 1 and 3, Wilding; 2, Midwinter. Pullet, 1, Wilding; 2, Riverview Poultry Yards; 3, Wise.

Red Caps—All to Walker Bros, except 2 pullet, to J. Dixon, Winnipeg.

Orpingtons—All to W. A. Pettit, Winnipeg.

B. B. Red Game Bantams—Cock, 1, Reid. Hen, 1, Fortier; 2, Midwinter. Pullet, 1, Reid; 3, Anderson.

Duckwing Bantams—1 and 2 pullet, Midwinter.

A. O. V. Bantams—1 cockerel, 1 pullet, J. W. Higginbotham, Virden.

Black African Bantams—1 and 2, Chadwick. Hen, 1 and 3, Chadwick; 2, McLean. Cockerel, 1, Chadwick. Pullet, 1 and 2, Chadwick.

S. Sebright Bantams—Cock, 1 and 2, hen, 1 and 2, pullet, 1 and 2, Chadwick.

G. Sebright Bantams—Cock, 2, Balls. Hen, 2, and 3, Newall Bros. Cockerel, 1, Newall. Pullet, 2 and 3, Newall.

Buff Cochin Bantams—Cock, 1, Garside. Hen, 1, Garside; 2 and 3, Fortier. Cockerel, 1, Wilding. Pullet, 1, Anderson; 2, Garside; 3, Anderson.

White Cochinchin Bantams—Cock, 2, Anderson.

TURKEYS, GEESE AND DUCKS.

Bronze Turkeys—Adult cock, 1, Wilding; 2, Midwinter; 3, C. A. Horton, Winnipeg. Hen, 1, Hutchinson; 2, Wm. Kitson, Burnsides; 3, Midwinter. Cockerel, 1, Kitson; 2, Midwinter. Pullet, 1 and 2, Kitson.

White Turkeys—Cock, 1, H. Matthew, Winnipeg. Cockerel, 1, Hutchinson. Pullet, 1, Hutchinson.

Geese—Emden, Toulouse and Chinese—All to Midwinter.

Ducks, Pekin—(Old)—1, Midwinter. Pekin (young), 1 and 2, Riverview Poultry Yards. Muscovy, 1, Midwinter. Rouen, 1, Kitson. Indian Runner, 1, Riverview Poultry Yards. A. O. V., 1, Kitson.

BREEDING PENS.

Brahmas—2, Higginbotham. Buff Cochins—1, Blakely.

Partridge Cochins—1, Chadwick; 3, Anderson. Black Langshans—1, Chadwick; 2, Todd & Co.

Barred Plymouth Rocks—1, Munroe Bros; 2, Rutherford; 3, Chadwick.

White Plymouth Rocks—1, Dolbear; 2, Henry; 3, Munroe.

Buff Plymouth Rocks—3, Todd & Co. Silver Laced Wyandottes—3, A. J. Carter, Brandon.

Golden Laced Wyandottes—2, Reid.

White Wyandottes—1, Kitson; 2 and 3, Coatsworth.

Buff Wyandottes—1, 2 and 3, McArthur.

Spaniard—1, Wood.

Minorcas—1, Reid.

S. C. White Leghorns—1, Wood; 2, Munroe; 3, Mitchell.
R. C. White Leghorns—1, Wood.
S. C. Brown Leghorns—2, Chambers; 3, Williams.
Buff Leghorns—1, Johnson; 2, King. Indian Games—1, Chambers.
Black Hamburgs—1, Chambers.
Houdans—1, Wilding; 2, Wlse; 3, Anderson.
Orpingtons—1, Pettit.
Game Bantams—1, Reid.
Sebright Bantams—1, Newall Bros.
Peasants—All to Garside.
Guinea Fowls—1, Wilding.
Guinea Pigs—1, Balls.

PIGEONS.

Carrlers—1, Balls.
Blue Pouters—1, Balls; 2, H. S. Leake.
A. O. C. Pouters—1, Kennedy.
Barbs—1, Stokes.
Tumblers, S. F.—1, Balls; 2, Kennedy.
Tumblers, L. F.—1, Kennedy.
Jacobsins, Black—1, Balls. Red, 1, Balls. A.O.C., 1, Balls.
English Blue Owls—1, Stokes; 2, Kennedy.
African Owls—White, 1, Stokes. A. O. C., 1, Stokes.
Turbits—1, Anderson.
Fantails—White, 1, Kennedy; 2, Hinds. Black, 1, Kennedy; 2, Leake. Blue, 1, Kennedy. A. O. C., Kennedy.
Homers—Blue, 1, Leake; 2, Stokes. Black, 1, Montgomery. Black Check, 1, Stokes; 2, Leake. A. O. C., 1, Stokes; 2, Balls.
Oriental Frills—1, J. McLaren; 2, Stokes.

SWEEPSTAKES AND SPECIALS.

Lieut-Gov. Patterson's Challenge Cup for best pen Asiatic or American fowls, won by J. Kitson, Macdonald, with a pen of White Wyandottes.

E. L. Drewry's Challenge Cup and Gold Medal for best three males and three females, won by S. Wise, Winnipeg, with Houdans and Golden Wyandottes.

Nor'-West Farmer's prize of Lady's Gold Watch, for best pen of chickens shown by farmer, won by J. R. Henry, Chater, Man., with White Plymouth Rocks; 2nd prize, Silver Water Pitcher, by J. Kitson, Macdonald, won by E. Brown, Bolsevalin, with White Wyandottes.

Nor'-West Farmer's prize of Lady's Gold Watch, for best pen of Turkeys, won by W. Kitson, Burnside; 2nd prize, Association Cup, F. Hutchinson, Hayfield.

F. W. Drewry's Silver Medal, for best exhibit in American class, won by E. Coatsworth, Winnipeg, with White Wyandottes.

Geo. Wood's Silver Cup to the exhibitor showing most birds scoring 90 or over, and paying transportation charges on his exhibit, won by T. Chambers, Brandon.

W. J. O'Connor's Silver Cup, for most birds scoring 90 or over in Game class, won by T. Chambers.

D. McKenty's Cup, for best exhibit of Geese, won by C. Midwinter.

Victoria Hotel Gold Medal, for best pair Plymouth Rocks, won by H. A. Chadwick, St. James.

Dr. Dame's Gold Medal, for best pair Langshans, won by H. A. Chadwick.

Geo. Velie's prize, value \$5, for best pair in French class, won by S. Wise, Winnipeg.

R. J. Whitla's prize, for best exhibit in Mediterranean class, won by Geo. Wood, Louise Bridge.

R. J. Whitla's prize, for best exhibit in Asiatic class, won by H. A. Chadwick.

John Todd's prize, for best pair Barred Rocks shown by farmer, Munroe Bros.

J. H. Anderson's prize, for best Black Leghorn cockerel, won by Miss D. Hinds.

Best pair Buff Leghorns, J. M. Johnson.

Best Buff Leghorn Pullet—J. A. King.

Best collection of Buff Leghorns—J. A. King.

Best pair White Minorcas—J. Kennedy.

Best collection Pigeons—R. Stokes.

Farmer's Advocate Prize—Five yearly subscriptions, as follows:—Best Barred P. Rock cockerel shown by farmer, Munroe Bros.; best White Wyandotte cockerel shown by farmer, J. Kitson; best L. Brahma cockerel shown by farmer, J. E. Kimberley; best Bronze Turkey cock shown by farmer, F. Hutchinson; best pair Pekin Ducks shown by farmer, C. Midwinter.

There were a few specials not placed as we went to press. These will be given in next issue.

Letter of Thanks.

Burnside, Feb. 26th, 1900.

The Nor'-West Farmer,

Winnipeg, Man.

Gentlemen,—Allow me to thank you heartily for the magnificent prize—a lady's gold watch—given by you, and won by me at the recent exhibition of the Manitoba Poultry Association for the best pen of young turkeys. The watch has been presented to Mrs. Kitson, and she is very proud of it, as it is both a beauty and a true time-keeper.

Yours truly,

WM. KITSON.



Barred P. Rocks.

Buff P. Rocks.

Black Langshans.

Silver S. Hamburgs

In BARRED ROCKS I have 3 A 1 Breeding pens, headed by PRIZE-WINNING COCKERELS, Eggs \$2.00 per 13.
JOHN TODD, 455 Henry St., W'peg, Man.

RIVER VIEW STOCK & POULTRY FARM

Awards at Manitoba Poultry Show, Feb. 21, 1900

First on pair Pekin Ducks; second on Pekin Ducks. First on Indian Runner Ducks; second on Black Minore Cockerel, scoring 92½; third on Hen, scoring 92 pullets all scoring 90 and over. Some fine stock for sale in Cockerels, scoring 90 and over. A few more pairs of Pekin Ducks for sale reasonable. A beautiful trio Andalusians that will win, from Hogin's strain, Albany. Fine B. P. Rock Cockerels at \$1.50 each.

RIVER VIEW POULTRY FARM.

C. H. WILSON, Manager, Winnipeg.

Birtle Poultry Yards.

W. T. BELNERS, Box 28, Birtle, Man., Prop.

Houdan and Silver-Laced Hamburg Eggs for sale. Eggs guaranteed fresh. \$1.50 per setting of 13.

I have also Norwich crown and plain-headed Canaries for sale at all times.

"ACME" POULTRY YARDS.

Boyd Ave., Winnipeg. W. A. PETTIT, Prop.

EGGS FOR HATCHING from
S.C. WHITE LEGHORNS \$2 and 1 setting
S.C. BLACK ENGLISH ORPINGTONS \$3
BARRED PLYMOUTH ROCKS \$1

Orders booked at once. Delivery after 15th April.

NOTE.—Our Single Comb White Leghorn pens are better than ever. Only a limited quantity of Orpington eggs to spare. Order at once if you want to secure a setting.

B. P. ROCKS, S. L. WYANDOTTES

Highest Scoring Pen of S. L. Wyandottes at the Poultry Show, 1900. and highest Hen Chinese Geese—7 eggs for \$2.00.

Setting of 13 eggs from my best birds, \$2.

A. J. CARTER, BRANDON, MAN.

FANTHORPE POULTRY FARM.

EGGS FOR HATCHING:

Barred Plymouth Rocks, } per setting—\$1.00
Imperial Pekin Ducks, }

Orders booked at once. My birds are first-class and are from first prize winners.

ERNEST E. SWIFT, CLOVER BAR, Alta.

WINNIPEG POULTRY YARDS.

HOUDANS and GOLDEN WYANDOTTES

Winners at Poultry Show, 1900, of 4 firsts, 2 seconds and third. Also sweepstakes for best pair of Houdans and the Drewry Challenge Cup for highest scoring, 3 males and 3 females. Choice birds for sale. Eggs \$2 per setting. Book orders now.

Address—S. WISE, 759 Elgin Ave., Winnipeg, Man.

SPECIAL.

To make room for stock I will sell, at a special bargain, 4 White Cochin hens and pullets and 1 cock; also 1 Partridge Cochin cock, 2 hens and 1 pullet. The White Cochin took second at Winnipeg Industrial Fair last summer. Write to day.

GEO. WOOD, Holland.

Buff Cochins

A few choice Cocks and Cockerels
FOR SALE.

F. D. BLAKELY, 285 Ellen St., Winnipeg.

When writing advertisers mention The Farmer.

Crowded Out.

We had in type for this issue a full account of the Poultry Convention, held in Winnipeg on Feb. 21st, also a description of the cramming process for fattening fowl, but we will have to leave both over for our March 20th issue.

Successful Manitoba Poultry.

Several of the Winnipeg poultry men sent fowl down to the St. Paul Poultry Show in the early part of February, and were successful in winning the following prizes:—Geo. Wood, Louise Bridge, first and special for R. C. Leghorn cock; first and special for S. C. Leghorn pullet; first for Black Spanish pullet, and fourth for S. C. Leghorn cock. Thos. Reid, Winnipeg, first for B. R. Game Bantam cockerel; first for B. R. Game Bantam pullet; second for Golden Wyandotte hen, and third for black Minorca hen. C. H. Wise, third for Golden Wyandotte cockerel, and fifth for Houdan hen. Not so slow for Manitoba.

John Todd, Winnipeg, has purchased the first prize Barred Plymouth Rock cockerel, scoring 93 at the recent exhibition of the Manitoba Poultry Association, from H. A. Chadwick, St. James. Mr. Todd has a strong lot of hens, and intends to place this bird at the head of his breeding pen. Next summer's chicks will undoubtedly confirm his wisdom in securing such a high-class bird to mate with his hens.

For Over Fifty Years

Mrs. Winslow's Soothing Syrup has been used for over fifty years by millions of mothers for their children while teething, with perfect success. It soothes the child, softens the gums, allays all pain, cures wind colic, and is the best remedy for Diarrhoea. It will relieve the poor little sufferer immediately. Sold by Druggists in every part of the world. Twenty-five cents a bottle. Be sure and ask for "Mrs. Winslow's Soothing Syrup," and take no other kind.

REID'S POULTRY YARD.

Breeder of **BLACK MINORCAS, GOLDEN
WYANDOTTES and BLACK & RED
GAME BANTAMS.**

At Manitoba Poultry Association Show, Winnipeg, I won on Minorcas 1st pen, 1st cockerel, 1st heu, 3 d pullet. On Wyandottes, 1st cock, 2nd pullet, 2nd pen. Bantams, 1st cock, 1st pullet, 1st pen.

EGGS—\$2.00 per setting.

THOS. REID, 293 Lizzie St., Winnipeg

White Wyandottes, Barred Rocks, Black Javas.

My birds won six FIRST prizes, one second and four specials including Lieut.-Gov. Patterson's cup for the highest scoring breeding pen, any variety, at Manitoba Poultry Show, Winnipeg, Feb., 1900. Eggs \$2.00 per setting.

JNO. KITSON, Macdonald, Man.

THE PROFITABLE HEN

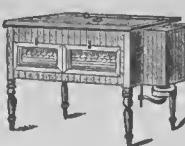
is the one that will lay both winter and summer. Green Cut Bone will make her do it. It has been found by actual experience to double the eggs in every instance where used. The

ADAM GREEN BONE CUTTER

cuts bone in the most satisfactory way. Leaves the bone in fine shavings easily consumed by chicks or mature fowls. Can't be choked by bone, meat or gristle. Cleans itself. Turns easiest because it is the only cutter made with ball bearings. Several sizes for hand. **W.J. Adam, Joliet, Ill.**

DR. BARNARDO'S HOME.

The managers of these institutions invite applications from farmers and others for boys and youths who are being sent out periodically, after careful training in English homes. The older boys remain for a period of one year at the Farm Home at Russell, during which time they receive practical instruction in general farm work before being placed in situations. Boys from eleven to thirteen are placed from the distributing home in Winnipeg. Applications for younger boys should be addressed to the Resident Superintendent—115 Pacific Avenue, Winnipeg, or P. O. Box 970—and for older boys, possessing experience in farm work, to Manager Dr. Barnardo's Farm Home, Barnardo, Man.

Safety Incubators and Brooders

Are the **BEST**, most reliable, and cheapest machines you can buy. Fire-proof heaters, fire-proof lamps, absolutely self-regulating, supply their own moisture, and are fully guaranteed. For circular, &c address the manufacturer.

**J. E. MEYER,
KOSSUTH, ONT.**

POULTRY SUPPLIES.

SEND CARD FOR CATALOGUE.

Commission agent for guaranteed dated eggs. Send me your eggs and I will place them at good prices with hotels, restaurants and private houses. Prompt remittances.

I have a few White Plymouth Rock Cockerels for sale. See my prize winnings at Poultry Show in this issue. Eggs for sale.

R. DOLBEAR, 1238 Main St., W'peg.

**DON'T BUY
INCUBATOR**

until you see our catalogue. The TORONTO INCUBATOR is the best machine made. Write for catalogue. Address—

T. A. WILLITS, 514 Dundas St., Toronto, Ont.

**Maw's Poultry Farm.
WINNIPEG, MAN.**

Breeds best strains of utility breeds thoroughly acclimatized and best adapted to our climate. Have for sale stock and eggs of Mammoth Bronze Turkeys, Toulouse Geese, Imperial Deep Keeled Pekin Ducks, Rouen Ducks, White Wyandottes, White Leghorns, Silver-laced Wyandottes, Light Brahmans, Hero strain of Plymouth Rocks, Homing Pigeons from best imported Belgium stock, same as used by military department for carrying messages from beleaguered cities. Am North-west agent for the celebrated Cyphers' incubator. Mr. Cyphers is the discoverer and patentee of the diffusive principle in artificial incubation, saving the lives of thousands of chicks that die in the shell in ordinary incubators. It is asbestos coated and perfectly fire-proof—regulates its own moisture and so simple—a child can run it. Large illustrated poultry catalogue giving list of prizes and medals won at all leading exhibitions, with prices, description and pedigree of stock mailed free on receipt of address.

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INCUBATOR CO.**

The **BEST and the CHEAPEST.**

95 Per Cent. Hatches are often reported by those who use these Incubators. One reason for this record is absolute uniformity of temperature in egg chamber; correct instructions for operating; has fire-proof lamp. A great mistake it would be to purchase an Incubator or Brooder without first getting a copy of our 148-page Catalogue. Send 3 cents for illustrated Catalogue of Incubator, Brooder, Poultry and Poultry Supplies.

"**THE POULTER'S GUIDE**" (new edition) 15 cents by mail.

O. ROLLAND,
24 St. Sulpice St., MONTREAL.
Sole Agent for the Dominion.

**A Poultry Paper
Three Years for \$1.**

We will send the CANADIAN POULTRY REVIEW three years for \$1, or to three subscribers one year for \$1. Special departments for "Turkeys, Ducks and Geese," "Poultry Ailments," "Bantams," "Incubators and Brooders," "Practical Poultry" (under charge of A. G. GILBERT, Manager Poultry Department, Government Farm, Ottawa), etc. New illustrations, critical show reports, 40 to 48 pages monthly. Single copy 5c. Address, Toronto, Ont.

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FOR
Consumptives
MEDICINE FREE.**

Medical experts advocate the separation and isolation of consumptives. This is right, but they should go a step further and recommend the Slocum Cure. Thousands of consumptives have been cured—many in the last stages, by using the Slocum Cure.

Never was there a cure for lung troubles equal to the newly-discovered Dr. Slocum treatment. This forms a system of three remedies that are used simultaneously, and supplement each other's curative action. It cures weak lungs, bronchitis, coughs, consumption and every other ailment of the pulmonary regions. It destroys every germ that can effect the respiratory system, and even in advanced stages of lung trouble positively arrests the tubercular growth, while it also builds up the patient so that his system is enabled to throw off all other wasting diseases.

SPECIAL NOTE.

The Slocum treatment is medicine reduced to an exact science, and this is an honest, straightforward offer.

If the reader is a consumptive, or has lung or throat trouble, general debility or wasting away, do not despair, but send your name, post-office and nearest express office address to T. A. Slocum Chemical Co., Limited, 179 King Street West, Toronto, when three large sample bottles (The Slocum Cure) will be sent you free. Don't delay until it is too late, but send at once for these free samples, and be convinced of the efficacy of this great remedy.

Persons in Canada seeing Slocum's free offer in American and English papers will please send to Toronto for free samples. Please mention this paper.

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ASSOCIATION.**

Under authority of sections 39, 40 and 41, Cap. 121, R.S.M., the following only are entitled to practice as Provincial Land Surveyors in Manitoba:

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By order,
J. W. HARRIS, Secretary,
P. L. S. Association.

N.B.—The practice of surveying in Manitoba by any other person is illegal, and renders him liable to prosecution.

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Wholesale Wines and Liquors.**

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BRANDON..

Mail Orders promptly executed.



and save the toll. You have the horses, we have the power and mill. Thousands of the
PEERLESS MILLS
are now in use. They work
FAST, FINE, EASY.
Make family meal or feed.
Agents Wanted Everywhere.
Circulars, prices, &c., free.
W. J. ADAM, JOLIET, ILL.

When writing advertisers mention the Nor-West Farmer.



The Dairy Convention.

The fourteenth annual convention of the Manitoba Dairy Association was presided over by the president, D. W. McCuaig, with the largest attendance ever yet seen there. The chairman referred to the progress made within the century along all the lines of agricultural science and practice, dairying included. The directors' report on the work of the year was received and approved. Local conventions had been held at various points, and wherever dairying is a live business these meetings had been a good success. Resolutions favoring the policy of holding local conventions this year were strongly supported, and a committee appointed to wait on the Local Government asking for their continuance this season. David Munroe, representative to the Industrial Exhibition, gave a very interesting report on his work in connection with the exhibition. The treasurer's report showed an income of \$332.69, and an expenditure of \$276.35.

OFFICERS AND DIRECTORS.

The following is the list of officers and directors for the ensuing year:

Hon. Pres.—Wm. Wagner; Pres.—Wm. Grassick, Pilot Mound; First V.-P.—R. Waugh, Winnipeg; Second V.-P.—W. B. Gilroy, Macgregor; Sec.-Treas.—Miss E. Cora Hind, Winnipeg.

Directors—E. A. Struthers, Russell; Wm. Scott, Winnipeg; D. Munroe, Winnipeg; D. W. McCuaig, Macdonald; Wm. Ryan, Ninga; A. R. Fanning, Newdale; J. T. Regehr, Hochstadt; D. Jackson, Newdale; G. Harcourt, Winnipeg.

Auditor—G. H. Greig.

Representative on Exhibition Board—D. Munroe.

REPORTS FROM CREAMERIES.

Several interesting reports from butter and cheese factories were read. W. B. Gilroy carries on the Macgregor factory as a private enterprise, paying for his cream every fortnight. Made 30,000 lbs., sold to British Columbia, average price 18 cents. Patrons get 13½ cents. Expects an increase of patronage.

Shelburne, also a private enterprise, by T. C. Gerrard, made 30,078 lbs., price 17.86 cents. Patrons get 13 cents. Collecting cost 2.13 cents; making, 2.23 cents.

Brandon and Morris, both operated by the R. A. Lister Co., and reported on by W. Scott. Brandon made 70,000 lbs., barely paying. Morris had a very bad start, owing to defective machinery in the launch used for collecting on the Red River. An excellent centre for railroad transport. Hopes it will do well in future.

Jas. Bousfield's factories sold make at near 18 cents. Central factory is at Portage la Prairie. Made 79,000 lbs., 15 cents paid to patrons sending cream all the season.

Wm. Ryan reported that, through lack of harmony among the farmers, and high prices offered by local merchants for home dairy butter, the factory at Ninga had not been operated. Several other factories reported severe competition in the same way.

Fairplay Creamery, Pilot Mound, reported on by John Cowan. This factory furnishes a choice example of what can be

done by good management and steadfast patronage. Beginning in 1896 with a make of 38,370 lbs., it increased to 68,313 lbs. in 1899—a steady increase of 10,000 lbs. a year. The proceeds have more than doubled—\$6,215 in 1896; \$12,548 in 1899. The cost of manufacture, including haulage, has varied very little, averaging 4.75 cents per lb. The price has risen from 16.05 cents to 18.36 cents. The tests made of patrons' cream were avowedly favorable to the factory, and the make overran the tests 830 lbs., equal to less than 1½ per cent. A cold storage room, costing \$167, was put up last summer, which has proved cool and dry, no mould anywhere. An ice-house, costing \$67, was also put up. The capital account shows \$2,290 to the good.

Newdale, reported by D. Jackson. Make 76,000 lbs., sold for 17.3 cents. Patrons were paid 14 cents. Bad roads in early summer did much to prevent fuller deliveries. Expect 100,000 lbs. this season.

The above-named two creameries are the leading factories in the Province, and their outlook is very hopeful.

Crystal City made 35,752 lbs., sold at 18.2 cents. Cost of making and hauling, 4.4 cents.

Birtle, reported on by F. G. Lewis, had an increase of 50 per cent over the previous year's production, and excellent prospects for the coming season. Average price paid to patrons 18½ cents.

The question of unsatisfactory butter tests was pretty thoroughly gone into. Most of the kickers are found to be recent patrons, some of them not well posted in the management of their separators, and in the handling of their cream. Drivers, who are careless in mixing before taking their test samples, are also to blame. Greater care in handling the milk and cream, in avoiding the mixing of new and old cream, and in cooling before mixing, are all points essential to success. The cream should be strained before going into the churn, and greater pains taken to avoid the causes leading up to unsatisfactory flavors in the butter product.

CHEESE FACTORIES.

Steinbach made 21,351 lbs. cheese, sold at 10½ cents, of which patrons got about 9 cents.

Greenthal made 37,934 lbs., the return for which was a shade lower than at Steinbach.

Blumenort made 45,746 lbs., sold at 9 cents. The hauling is all done on the cooperative plan, each man doing the haul proportional to the milk he supplies.

Grove, a small private factory, 50,000 lbs., milk received. Product sold at 10½ cents.

Hochstadt, 193,047 lbs. milk, made 20,035 lbs. cheese. Average price, 10½ cents.

All the above are Mennonite factories and one or two more small places among them were reported on. The haul is short and prices last year were very satisfactory.

THE CARE OF MILK FOR BUTTER AND CHEESE MAKING.

Mrs. Jos. Yuill, of Carleton Place, Ont., gave an instructive address on this subject. Mr. Yuill is a veteran Ayrshire breeder and his wife has long had a reputation for the making of gilt edged dairy butter. The cow should have good food and pure water, regular and kindly care, combined with thorough cleanliness in the stable and in the dress and hands of the milker. To strain through two-ply of cheese cloth is the best way to keep out impurities. Milk vessels require special care to keep them free from injurious bacteria and the farmer's wife must be one that grudges no pains to make sure of every detail contributing to the production of a fine flavored butter.

TENDERS WANTED.

For the purchase of the

Macdonald Creamery

Tenders will be received for the machinery separate from the building, or for both building and machinery. Terms cash. Capacity of plant for 400 cows. The highest or any tender not necessarily accepted. Tenders will be received up to 3 o'clock p.m. March 15, 1900, addressed to the undersigned.

D. W. McCuaig, Sec., Macdonald P.O., Man.

Lister's

Alexandra

and

Melotte

Cream

Separators



For Large or Small Dairies

Stand Unrivalled.

WHAT answer have we to make to those agents who persistently advertise their Separators as the best? This is a question we are frequently asked. The agents referred to are, as a rule, men who have no interest in the dairy industry beyond getting their commission. One of them was heard to observe—"my method is to sell all I can in a district for about a month, then clear out." For separating the unwary farmer from his hard-earned money, we admit they are the best; but in no other sense. In purchasing a Separator, you make no mistake in getting one from us, as we guarantee them in every respect, and are in a position to make that guarantee good.

For prices, terms and all other information, write to—

R. A. LISTER & CO., Ltd.

232 King St., WINNIPEG.

Webber's Hydro-Lactic Cream Separator.

It is the latest, simplest, cheapest and most labor-saving utensil for Butter making on the Farm. Cream in one to three hours without labor. A trial given to all responsible parties. Call or address

T. S. WRIGHT,

216 James Street, WINNIPEG, MAN.

La Hispania,
Khedive,
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Cigars

Are all guaranteed PURE HAVANA FILLED and will please the most fastidious smoker who appreciates the fine qualities of a genuine Cuban tobacco. Manufactured by

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WINNIPEG.



X-RAYS Our X-Ray Tube is a wonderful little invention that will both astonish and amuse you. Looking through it you see the bones in your hand, the lead in a pencil, the hole in a pipe-stem, etc., etc. Mailed postpaid for 15c, or two for 25cts. Don't send stamps. Johnston & McPherson, 71 Yonge St., Toronto, Canada.

WHEN BUYING

Why Not Get the Best

MIKADO CREAM SEPARATORS

ARE THE BEST

**Women
Interested.**

**Farmers' wives have few
labor-saving helps. Their
work is often one of pro-
longed drudgery.**

which is rotated at a high rate of speed, causing the milk and cream to separate because of the difference in their weight. It is merely the hastening of the natural action of gravity. It is a fact that a child with one of our smaller machines can keep up with the milking of three men. Butter made from this sweet cream is of the best quality and commands the highest price. Grocers know the difference and pay accordingly. They can easily tell that which is made from "separated" cream. The general advantages secured by using a Separator are as follows: 1. It saves a great deal of LABOR, especially for the women on the farm. 2. It saves TIME in butter-making, reducing it more than half. 3. It saves the COST of utensils and the space required for their accommodation. 4. It saves the cost and handling of ice needed to keep the milk sweet. 5. It produces MORE cream from a given amount of milk. 6. It produces BETTER cream. 7. If cream is sold, the Separator cream commands a better price. 8. Separator cream is more "churnable"; it can be churned in less than half the time. 9. As it is perfectly sweet, it is more valuable to use in making ice cream, and commands a better price. 10. It gives from 10 to 25 per cent. greater yield of butter; that is to say, from 20 to 50 lbs. more from the milk of each cow. A difference of from \$5 to \$10 per cow per year. 11. The cream and skim-milk will keep sweet much longer. 12. Doubles the value of skim-milk for feeding to stock. The farmer can feed his calves fresh warm milk, instead of old sour skim-milk. The milk is free from disease germs, because the filth is removed by the Separator. **We have sold between 600 and 700 Separators within the last 20 months, and reproduce below a very few of the many Testimonials we have received:**—

Manitoba Cream Separator & Supply Co., Winnipeg, Man.

ROCK LAKE, Oct. 4, 1899.

Gentlemen,—The Mikado Cream Separator I purchased from your agent at C. City is all he claims for it. It can separate a pail of milk in four minutes and turns very easy, and can be cleaned in three minutes after using. I have nine cows and have made price of machine over and above what I got before I purchased the machine. I have had separator since April, 1899. Six good cows will pay for separator in 12 months.

WILLIAM SLACK.

LETHBRIDGE, N. W. T., July 10, 1899.

We are using the Mikado Separator No. 5845, and it is giving perfect satisfaction in every respect. Will be glad to answer any inquiries respecting the machine.

LITTLEBOW CREAMERY CO.

PILOT MOUND, Manitoba.

I am more than pleased with the Mikado Separator I bought from you. I consider it the best separator on the market. It is easy to turn and a first-class skimmer. I am raising 15 calves and they look better this summer than I ever had them before; their coats are firm and thick and they are all fat. They have had no chops. The separator not only makes money for me, but saves me a lot of labor. We have no pans lying around in the way as formerly, but now everything is washed up and put away just after milking.

JOHN DICKINSON.

POPLAR PARK, Man., Sept. 26, 1899.

Dear Sirs,—I would not lose the Mikado Separator for \$200. It has done all it is said to do, and does it satisfactorily. I have no fault with it at all. It runs light, and skims the milk as well as can. Being a Swede, I know of several separators, but none does better work than this Mikado I have. I remain, Yours truly,

JOHANNE ANDERSON, Postmaster, Poplar Park, Man.



Are You Up-to Date?

The old method of "setting" milk for cream now as obsolete as muzzle-loading gun, grass scythe or grain cradle.

TERMS

To suit all buyers. You can make the price of a MIKADO CREAM SEPARATOR out of the extra butter received before you have to pay for it.

EASIEST

Running, cleanest skimming, and all washed up and ready for next time in three minutes.

If you do not know about the MIKADO we will be glad to send you Pamphlet with full information.

The old plan of butter-making is one which involves much unclean drudgery for the woman of the farm. Many farmers do not think of this. There is no good reason why this work of the farmer's helpmeet—"whose work is never done"—should not be made as light and agreeable as possible. This may be one of the reasons why the farmer's wife breaks down so soon or loses her early freshness; while the farmer, with his many and often costly labor-saving machines, has so lightened his part of the work that much of his old-time drudgery is a thing of the past.

While farmers are proverbially fond of their wives, they do not always spare them in their work as much as they might. A man is either mean or thoughtless who will insist upon having the most modern make of reaper, mower and hay-rake, while compelling his patient and uncomplaining wife to drudge on, unaided by so important a mechanical device as the Cream Separator. The Separator is now recognized as a NECESSITY on the farm. The fact that several hundred thousands are now in use throughout the world indicates that it is no longer an experiment, since by its work and the labor it saves, it is a device which pays for itself in a short time. There is nothing marvellous about this process. The milk is fed from a receiver into a bowl

which is rotated at a high rate of speed, causing the milk and cream to separate because of the difference in their weight. It is merely the hastening of the natural action of gravity.

It is a fact that a child with one of our smaller machines can keep up with the milking of three men.

Butter made from this sweet cream is of the best quality and commands the highest price.

Grocers know the difference and pay accordingly. They can easily tell that which is made from "separated" cream.

The general advantages secured by using a Separator are as follows: 1. It saves a great deal of LABOR, especially for the women on the farm.

2. It saves TIME in butter-making, reducing it more than half.

3. It saves the COST of utensils and the space required for their accommodation.

4. It saves the cost and handling of ice needed to keep the milk sweet.

5. It produces MORE cream from a given amount of milk.

6. It produces BETTER cream.

7. If cream is sold, the Separator cream commands a better price.

8. Separator cream is more "churnable"; it can be churned in less than half the time.

9. As it is perfectly sweet, it is more valuable to use in making ice cream, and commands a better price.

10. It gives from 10 to 25 per cent. greater yield of butter; that is to say, from 20 to 50 lbs. more from the milk of each cow.

A difference of from \$5 to \$10 per cow per year.

11. The cream and skim-milk will keep sweet much longer.

12. Doubles the value of skim-milk for feeding to stock.

The farmer can feed his calves fresh warm milk, instead of old sour skim-milk.

The milk is free from disease germs, because the filth is removed by the Separator.

We have sold between 600 and 700 Separators within the last 20 months, and reproduce below a very few of the many Testimonials we have received:—

SELKIRK, Man., Sept. 22, 1899.
I have six cows and find I make 50 per cent. more butter with the Mikado Cream Separator than I formerly did by the old process of deep-setting cans. Apart from the profit, it is very clean and it saves me a great deal of work and time. Our calves of this spring are as large as any others we have ever had at one year old and much fatter. I find the greatest benefit derived in the winter and now have no difficulty with the cream, when in the past it required time and trouble to prepare the cream. I would not be without it if I could not get another for considerable more than I paid for it.

MRS. MUCKLE, Clandehoye P. O.

WINNIPEG, Man., Oct. 6, 1899.
I bought your Mikado Separator last March and have since received splendid satisfaction. It has done all the agent said it would do. It saves us a lot of work, skims perfectly clean and runs easier than any other machine I have ever seen. I now make over 50 per cent. more butter with the separator than I did from the deep-setting cans, although I do not get near that proportion of cream extra, and I think the churning is easier. It is very cleanly. I detected blood in the milk which troubled one of my cows all summer, otherwise I am satisfied I should have known nothing of it, and would have churned just the same. I would not do without it for considerably more than it cost us, provided I could not get another.

HENRY SHARMAN.

COEDMORE FARM, Solsgirth, Oct. 24th, 1898.
Gentlemen,—I desire to say how pleased I am with the Mikado Separator. It does its work thoroughly, and is very easy to run.

JOHN L. WHITWORTH.

BELCARRE, April 8, 1899.

Gentlemen,—I have been using one of your Mikado Separators that I purchased from your agent at Lorlie for the past season. It is all that it was recommended. Skims clean and easier than any other machine I have tried.

Yours truly, JOHN MORTON.

Manitoba Cream Separator Co.

Winnipeg,
Manitoba

HOW TO EXTEND THE MILKING PERIOD OF OUR COWS.

The school of methods on the above subject was opened by George Harcourt, of The Nor'-West Farmer. He put up his points on a blackboard so that all could see them. He thought the first essential was to extend the mind of the owner of the cows so that he would want better things. The next essential most easily attained was green fall feed to keep up the flow of milk, and he suggested in order, Brome grass, corn, peas and oats or sheep oats, then tasty roots. Turning to other things, he suggested milking the heifers with their first calf as long as possible, so that they would form the habit of persistent milking; then better winter care, as many a time the summer's profits were lost by careless wintering; next, better summer care, and lastly, as being a more difficult step, having the cows calve in the fall. This means good buildings, but there is more time during the winter to look after them, and the cows can go dry when mosquitoes, flies and bull dogs are the worst, and during the harvest season, the busiest season of the year.

Jas. Glenrie, Longburn, besides making several good points on dairy management, gave the details of milk production from five cows he had put under what was meant for a full year's test. One in ten months had given 10,500 pounds of milk and 450 pounds of butter, realizing \$78. The other four had given an average of 8,000 pounds of milk each, or in all 1,200 lbs. of butter. These cows during the winter had so far averaged \$12 a month.

A. K. Baird, butter maker, and John Cowan, Pilot Mound, gave further points along the same line.

W. M. Champion, Reaburn, contributed some more good points from his own long experience in Manitoba home dairying. He thought 300 days each year long enough for any cow to milk. What she gained in those idle days was not lost on her whole year's work.

Professor Henry, of the Experiment Station, Madison, Wisconsin, in a short address, drew attention to a fact not often noted, namely, that a family's butter bill was about twice as much as its flour bill. Devoting one's time to one feature only of farming was a great mistake. Diversified farming always paid best and various illustrations were given to prove this from the speaker's own extensive observation. While lands in the Red River valley in the Dakotas were becoming poorer by depletion from continuous wheat raising, the Wisconsin lands were getting richer by cattle raising and feeding the bran from the wheat of the Red River valley.

The last address of the afternoon was from J. W. Mitchell, Dominion Government Dairy Superintendent for Eastern Assiniboia, on "More Profitable Dairying," which is held over for want of space.

EVENING SESSION.

The first paper at this session was by C. A. Murray, Dairy Superintendent for Manitoba, on "The Best Method of Construction for Ice Houses and Cold Storage for Creameries," which we hope to publish in our next issue.

WINTER v. SUMMER DAIRYING.

Mr. Joseph Yuill, Carleton Place, gave his experience in the handling of cows for dairy purposes. He had put his heart into the business and kept on learning all he could about it. He did not know it all yet, but would tell the best he knew. Flies were a terror to cows in some of the summer months. His cows come in during the fall. When the nights begin to get cold they should be stabled and in the winter months his cows rarely set foot

outside the stable door. Before calving the cow should be put in a box stall. He put a small partition across one corner of this stall, about 3 ft. high and put the calf inside as soon as it was dropped. He

wanted the cow to lick the calf, but never to let the calf suck her. He did not approve of milking any cow before she calved. Heavy yielding cows in their prime were liable to milk fever, but the best

What a Creameryman Says.



Isn't the statement of disinterested parties who have given the SHARPLES TUBULAR SEPARATOR a thorough test, more likely to be true than the statements of jealous competitors, who are doing their utmost to prevent creamerymen from giving the TUBULAR a trial? Here's what a prominent Iowa creameryman says:

Hazel Green, Iowa,
Feb. 12, 1900.

The Sharples Co., Chicago, Ill.
Gentlemen:—

The TUBULAR Separator bought of Haney-Campbell Co. last July is doing excellent work for me. It has been skimming down to two and three one-hundredths, running at a rate of 24,000, and skimming 2,500 lbs. to 2,700 lbs. per hour. The cost of running is very light, both in fuel and oil.

Respectfully yours,
FRANK B. DICKEY.

The Sharples Tubular Separator

Is recommended by every fair-minded, unprejudiced creameryman who has given it a thorough trial. We guarantee it to produce more butter from a given quantity of milk than any other Separator.

The TUBULAR is a clean skimmer.

The TUBULAR produces velvety cream.

The TUBULAR saves oil.

The TUBULAR saves time.

The TUBULAR is easily operated.

The TUBULAR is easily cleaned.

The TUBULAR has large capacity.

The TUBULAR is absolutely safe.

We ask you to take no risk. We guarantee the TUBULAR to excel any other Separator, or no sale. Do not sign a contract for any Separator unless it grants you the privilege of trying a TUBULAR and purchasing the machine which suits you best.

THE SHARPLES CO.,
Canal and Washington Streets,
CHICAGO III.

{ ..Send for
Catalogue
No. 73.

P. M. SHARPLES,
West Chester,
Pa., U.S.A.

Maxwell's "Favorite" Churn.

DAVID MAXWELL & SONS
ST. MARY'S, ONT.

PATENTED
STEEL ROLLER BEARINGS.
IMPROVED STEEL FRAME.

and combined Foot and Lever Drive, improvements you will not find on other Churns. Do you want the best? Then don't purchase until you see it. Sold by the leading wholesale houses in the Dominion.

CAPACITY.	
No. 6	Churns from 6 gl. . . . $\frac{1}{2}$ to 3 gl. cream
10	1 to 5 "
15	2 to 7 "
20	3 to 9 "
26	4 to 12 "
30	6 to 14 "
40	8 to 20 "

Canadian Dairy Supply Co.
236 King Street,
WINNIPEG.

Agents Manitoba
and the Territories.



plan was to keep down the diet a little and give a pound of salts once a week for a week or two before the calf came. The first milk is the calf's natural medicine, and what the calf did not need he gave the cow. Regularity in feeding and milking are indispensable, the cow is the most sensitive animal on the farm and should be dealt with accordingly. He found the separator a great saver of labor. For very young calves he gave a little flax juice, and went on to a little dry oil meal flung into the pail after the calf had drunk off the milk.

The question of calves dying from drinking the foam from separator milk was here brought up. Mr. Lutley, of the dairy school, said much of the foam was due to the spout of the separator being so high above the pail it fell into. They had little foam. But it was soon pointed out that his milk had been cooled before it came to him and milk direct from the cow foamed much worse. It was agreed that calves would certainly be injured if given this foam to drink.

The last address of the evening was by C. Marker, Dairy Superintendent for Alberta. He dealt with the subject of "Flavor and Keeping Quality in Butter." A full report of this address will be given in a later issue.

This has been by general consent the best meeting the association has ever had and the representation from all parts of the province was highly satisfactory. The attendance from the Mennonite settlement was noteworthy.

The Sylvester Bros. Mfg. Co., Brandon, Man. have improved their seed drill for 1900. Among other improvements noted is a grass seed attachment adapted for sowing Brome grass.

There will be more Brome grass seed sown this spring than ever before. See the advertisements in this issue offering same for sale, and when ordering don't fail to mention The Farmer.

At the Brandon fair last summer, H. Cater Brandon, Man., was awarded the diploma over all competitors for the best exhibit of pumps and pump appliances. Mr. Cater always has a good stock of both wood and iron pumps on hand. When writing for quotations don't forget to mention The Farmer.

We call the attention of our thousands of readers to the advertisement of the Northwestern Hide & Fur Co., of Minneapolis, Minn. This is an old and reliable company, and has a national reputation for originating information and illustrations on the wild fur-bearing animals and their skins. They send out an immense quantity free to their patrons, and for the small amount of 4 cents to others, it being cheap at ten times this price. Write them for it and mention our paper. You can buy of them or ship to them in confidence. There is no duty on furs to the States.

TANNING FURS.

W. W. Carruthers, of Brandon, established a much needed plant in the province when he added to his business the necessary appliance for tanning hides and furs of all kinds with the hair on. He has spared no expense in fitting up this plant and has engaged an expert to take charge of the work. Samples The Farmer has seen of his work were all that any one could desire, the tanning being nice and soft and in every way the equal of anything we have ever seen elsewhere. Many good skins have gone to waste in the past because there was no place to get them nicely tanned and made up. Mr. Carruthers, with commendable enterprise, supplies that place and is prepared not only to tan hides and skins, but to dye them also, and make them into mats, robes or coats. One fine imitation bear skin coat we had the pleasure of looking at was a beauty and almost impossible to tell from the genuine article. It was made from a cow hide, if you have a hide that will make a nice robe, try him with it—you will not be disappointed.

Demill College ST. CATHERINES, Ont.

24TH YEAR.

Extensive courses of study under an efficient staff. Special advantages in Music, Art and Commercial Work. A cultured Christian home for young ladies. Pupils may enter at any time. Terms reasonable.

Rev. A. B. DEMILL, President.

YOUR ATTENTION

Our No. 1 Collection contains 33 full sized packets of the best Vegetable Seeds, sufficient to furnish vegetables throughout the year, and one packet of Wild-Garden Flower Seeds, which we will send prepaid to any address in the Dominion of Canada or United States for the extremely low price of \$1.

Our No. 2 Collection contains 16 packets of Vegetable Seeds and one packet Wild Garden Flower Seed Mixture. Prepaid for 50 cents.

Our No. 3 Collection contains 8 packets of Vegetable Seeds for 25c.

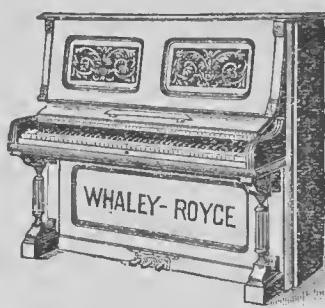
Our No. 4 Collection contains 40 packets of Flower Seeds for \$1.

Our No. 5 Collection contains 20 packets of Flower Seeds for 50c.

Our No. 6 Collection contains 10 packets of Flower Seeds for 25c.

All postpaid on receipt of price. For varieties in above collections see our Handsome Illustrated Catalogue containing other great offers. Mailed free to any address.

R. ALSTON, Royal Greenhouse & Seed Establishment, WINNIPEG, MAN



The Whaley-Royce Pianos

Are examples of all that is the LATEST and BEST in the REALM of PIANO CONSTRUCTION, and are now recognized throughout the Dominion as the highest type of Piano making.

EVERY INSTRUMENT GUARANTEED FOR SEVEN YEARS.

Correspondence invited. Catalogues and Prices furnished on application. Terms to suit the most modest incomes.

WHALEY, ROYCE & CO.,

158 Yonge Street, TORONTO, ONT.

192 Bannatyne Ave. East, WINNIPEG.

"PASTEUR" BLACKLEG VACCINE.

The original and genuine preventive vaccine remedy for Blackleg. Officially endorsed in all the cattle-raising States. Successfully used upon 1,500,000 head in the U.S.A. during the last 4 years. Write for official endorsements and testimonials from the largest and most prominent stockraisers of the country. "Single" treatment Vaccine for ordinary stock; "Double" treatment Vaccine for choice herds.

Registered **"BLACKLEGINE"** Trade Mark.

"Pasteur" single treatment Blackleg Vaccine ready for use (no set of instruments required). No. 1 (10 head) \$1.50; No. 2 (20 head) \$2.50; No. 3 (50 head) \$6. Easily applied. No experience necessary.

PASTEUR VACCINE CO.,
59 Fifth Avenue, Chicago.

W. J. MITCHELL & CO.,
Winnipeg, Man.



FREE CAMERA

by following the instructions. Outfit consists of 1 Camera, 1 box Dry Plates, 1 pkg. Hypo, 1 Printing Frame, 1 Developing Tray, 1 pkg. Developer, 1 set Directions, 1 Toning Tray, 1 pkg. Fixing Powder, 1 pkg. Silver Paper, 1 pkg. Ruby Paper. Camera and outfit securely packed in a neat box and all charges paid for selling only 15 Glass Pens at 10¢ each. They are over 5 in. long, made of colored glass, each securely packed in wooden case. Send this advertisement, with your name and address, and we will forward the pens. Sell them, return the money, and camera will be sent you all charges paid. Toledo Pen Co. Box N.W.F.

60,000

30,000 Maple Seedlings

30,000 Cuttings of Russian Poplar and Willow

Also a good stock of Small Fruits. Write for prices

CALDWELL & CO.,
Virden Nurseries.

VIRDEN, MAN.

Western Rye Grass.

I have the usual supply of pure Western Rye Grass Seed, at \$6.00 per 100 lbs., f.o.b. Virden. Bags extra.

K. McIVOR,
Roselea Farm.

VIRDEN, MAN.

FLOWER AND GARDEN SEEDS.

ALSO PLANTS OF EVERY DESCRIPTION IN POTS.

Cut Flowers, Roses, Carnations; all other sorts in season. Funeral Designs on short notice. Write for PRICE LIST to—

H. E. Philpott, Florist & Seedsman

338 PORTAGE AVENUE, WINNIPEG.

When writing advertisers mention The Farmer.

Pure Native RYE GRASS SEED FOR SALE.

Apply to **F. E. WENMAN,**
Spruce Lawn, Souris, Man.

SOMERVILLE & CO., STEAM MARBLE AND GRANITE WORKS

BRANDON,

Dealers in Marble and Manitoba Granite



MONUMENTS, HEADSTONES,
MANTELPIECES,
CEMETERY FENCING,
TABLETS, ETC.

Rosser Ave., Brandon, Man.

Represented by W. Somerville, W. C. Stewart,
A. W. Thomson, E. Patterson.

When writing mention this page

Announcement!

BRANDON SEED HOUSE, 1900.

A Need Supplied.

For some years past Manitoba and the Territories have felt the need of a "FIRST CLASS SEED HOUSE," near at home, where the price of purchases would not be doubled by paying long and excessive freight rates.

Brandon possesses many advantages which favor the establishment of such a house :—

1. Situated in an agricultural province.
2. Centrally located.
3. Shipping facilities which tap every part of the Province and Territories, reducing freight to a minimum.
4. These facilities are being increased and extended every year.
5. Seed bought in Brandon will reach you more quickly than eastern purchases.
6. The Government Experimental Farm is situated here, and
7. Its annual agricultural tests are invaluable to the farmers of this western country.

Seed houses do not precede the agriculturist, but follow him. The time has now come. The development of this western country demands the establishment of such a house, where good selected seeds, for both Field and Garden can be procured at a price consistent with quality.

The seed business when carried on in its entirety, embraces seeds for the field, vegetable and flower garden, greenhouse and forest. During the past few years we have done an extensive business in field seeds (the largest, we doubt not, of any one firm in the province), but we confined our attention to that one branch entirely.

In addition to carrying a first-class stock of Field Seeds, we have added this year a full and complete line of Garden, Vegetable and Flower Seeds. With such a stock we are in a position to meet all the requirements of the average agriculturist.

Our aim is not to see how many varieties we can enumerate in this catalogue, but we will carry in stock all and every kind of Field and Garden Seed which has been proven to be the best adapted to this western country, and upon this our customers may depend.

We wish to thank our patrons who have favored us with their orders for Field Seeds during past seasons, and now that we have added a full line of Garden, Vegetable and Flower Seeds we will be in a better position to supply your wants. We solicit a continuance of your valued orders as well as anticipate the pleasure of serving those whom hitherto it has not been our privilege to serve.

Yours respectfully,

A. E. MCKENZIE & CO.

General Information.

OUR TERMS—Are strictly cash, which must accompany each and every order.

REMITTANCES.—The safer and more inexpensive ways are to remit by express order, Post Office order, or bank draft. Express orders can be bought at any railway office; Post Office orders at any Post Office; bank drafts at any bank. Don't mail money in a letter without registering it. If you express the currency to us, pay the charges on it. We accept postage stamps for small sums.

PRIVATE CHEQUES.—If tendered as payment, should have 25c. added to cover exchange, which we have to pay in order to get cashed.

NAMES AND ADDRESSES.—Always write name plainly. If goods are to be shipped to a point other than your Post Office, be sure and give us full instructions.

PREPARED RAILWAY STATION.—Sometimes our farmer customers require their shipments sent to points on railway where there are no agents. In all such cases money to prepay freight must accompany order.

SHIPPING.—We ship by mail, express or freight, always protecting the interest of our customer by shipping which ever way will be the cheapest. This is determined by the size of your order. We have good facilities for packing, so that your seeds will reach you in good condition.

WE PAY.—Postage or express on all orders, one pound and under, on all seeds except beans, peas, corn, mangel, turnips.

YOU PAY.—Postage or express on all orders weighing one up to ten pounds, by adding at the rate of 4c. per lb. to our list price. Shipments by freight are collected from you on delivery, unless your station is a prepay point.

BAGS, SACKS.—Orders exceeding 20 lbs. grain of vegetable seeds, or 10 lbs. grass seed, add for cotton bags 20c. each, or 15c. for a first-class 2-bushel grain sack.

ERRORS.—We make them. So does every one, but we assure you if you will write us we will cheerfully correct them.

We use every precaution in the growth and selection of our seeds. Good pure seeds do not necessarily insure a good crop. There are so many conditions requisite—good land, shallow or deep sowing, climatic conditions, etc.—that we give no warranty, expressed or implied, as to quality, productiveness or purity, and we will in no wise be responsible for the crop. Every order received will be executed on these conditions only.

A. E. MCKENZIE & CO.

FIELD SEEDS.

Selected from the World's Golden Grain Belt.

DEPARTMENT IA.

It is a principle patent to all experienced agriculturalists that the further north seeds can be grown and matured, the better they are. Manitoba and the Territories have come to the front very rapidly in the production of cereals. They beat the world. Many eastern seedsmen give little or no prominence to this important department—FIELD SEEDS.

We have always recognized the paramount value of this department, which accounts for our being known as the FIELD SEED HOUSE OF THE WEST.

Spring Wheat

(These prices are subject to market fluctuations.)

Red Fife, "A" re-cleaned, per bus., 65c.
" "B" re-cleaned, per bus., 58c.

" "C" re-cleaned, per bus., 56c.

White Fife, "A" re-cleaned, per bus., 63c.
" "B" re-cleaned, per bus., 55c.

Blue Stem, choice, re-cleaned, per bus., 63c.

• Add 5c. per bushel for quantities under five bushels. We are very painstaking in the selection of these seeds. Our seed is grown by some of the very best farmers in Manitoba—men who specialize both as to variety and purity. We would recommend farmers to sow the "A" quality of wheat. Qualities "B" and "C" are good reliable seed, but we always think it is cheapest to sow the best that can be procured.

Oats—Change your Seed

The Oat crop in this province and in the Territories is the most abused, if we may so speak. Many farmers never change their seed. Nearly everybody sows oats on land that produced wheat crop the previous year, making it impossible to retain oats in the country free from wheat, etc., many of the oats, too, have traces of the wild oat in them. By careful selection, however, we have in stock some very desirable varieties and qualities, but owing to scarcity we have imported some selected qualities.

Oats

(These prices are subject to market fluctuations.)

BANNER (white).—This Oat has proven itself to be true to name, viz., the Banner Oat for this country. Supt. Bed-

Brandon Seed House Catalogue.

Oats (Continued.)

ford's yield for 1898 was 93.12 bus. per acre.

"A" quality, per bus., 40c.

"B" quality, per bus., 35c.

"C" quality, per bus., 30c.

Imported, per bus., 85c.

AMERICAN BEAUTY (white)—There is very little choice between this Oat and the Banner. With Supt. Bedford the yield was 27 lbs. less per acre. Imported stock, per bus., 90c.

IMPROVED AMERICAN (white)—We bought this seed from a farmer in Assiniboia whose yield of this variety was 14,000 bus. last year, 1899. He sells all his crop for seed, being situated a long way from railway facilities for shipping.

He specializes Oats, and says "the Improved American beats the Banner 10 bus. per acre with me." It has a stiff, strong straw and is almost free from rust. Has branching heads much the same as the Banner. Price, per bus., 65c.

ABUNDANCE.—These are a good Oat, but are not as heavy as the above three varieties and are more liable to rust. Imported stock, per bus., 85c.

TARTARIAN (black).—Supt. Bedford's tests of the white Banner and black Tartarian in 1897 and '98 proved the Tartarian to yield equally as good as the Banner on spring plowed stubble. We have a splendid stock of this variety. Per bus., 40c.

CALIFORNIA PROLIFIC (black).—A productive variety and a fine specimen of Oat. It ranks among the first of black oats with Supt. Bedford. Per bus., 75c.

Barley

(These quotations are subject to market fluctuations.)

ODESSA SIX ROWED.—This variety has been in good demand for some years past. Possesses a fairly stiff straw, matures early and is a good yielder.

"A" quality, per bus., 45c.

"B" quality, per bus., 40c.

"C" quality, per bus., 35c.

MANDSCHEURI, six rowed.—Tests of this variety at the Experimental Farms in Ontario and Manitoba give it first place and superior to the Odessa. The straw is a good length and strong, not apt to lodge. Imported stock, per bus., \$1.15.

If we may have some Mandscheuri (grown in this country) on hand in April, which we will be able to sell at about 75c. a bus. Write us about it.

WHITE HULLESS.—An excellent variety for this western country, where so much barley is used for feeding purposes. It is hulless, beardless, early, and weighs over 60 lbs. to the measured bushel. The straw is small and with very heavy leaves. For grain, sow one bushel to the acre; for hay, one and a half bushel. Per bus., 75c.

NEW BEARDLESS SUCCESS.—A new and distinct variety. It is the earliest barley known, being a week or ten days

earlier than any other. The straw is of a medium height, stiff, and stands up well on all kinds of land. Haying no beards it makes good feeding for cattle or horses. Per bus., \$1.25.

BLACK BARLEY.—While we carry some of this variety in stock to oblige some of our customers, we do not recommend the sowing of it, as it is almost sure to get mixed with other grains in the course of a few years. It makes a good feeding barley, but the White Hulless is a much more desirable and profitable variety. Imported stock, per bus., \$1.25.

Peas

Peas do well in this country when a reasonable amount of attention is given to their cultivation. The quantity sown is increasing every year, many sowing them with oats for green feed. It would be a profitable investment to sow them with a view of growing for seed to sell to dealers. They have always been a high price in this country, owing to heavy freights from the east. Some of our farmer customers buy 15 to 20 bushels every year. Many farmers make a mistake by sowing too late. They should be drilled in deeply during the month of April.

MUMMY.—A large and prolific variety; straw strong and erect, bearing the pods in clusters on the crown. Per bus., \$1.75.

CROWN FIELD.—Pods in clusters on crown or top of stock, prolific. Per bus., \$1.75.

CANADIAN BEAUTY.—A distinct variety and very productive. The grain is large, bright and a clear color; pods are well filled. The straw is of fine quality. Per bus., \$1.85.

GOLDEN VINE.—A standard variety. Per bus., \$1.70.

BLACK EYE MARROWFAT.—An old reliable. Per bus., \$2.00.

WHITE EYE MARROWFAT.—A well known variety. Per bus., \$1.95.

If you want a quantity of Peas, say 5 bushels or more, write us for special prices.

Field Beans

EARLY BOSTON NAVY.—Does well in this country, fully matures and ripens. Per peck, 75c., per bus., \$2.50.

Tares or Vetches

Grown for a forage crop. They can be cheaply raised. Feed green, cured or ensilage. They are sown at the rate of half a bushel to the acre, with a quarter bushel oats to hold them up. Per peck, 80c., per bus., \$2.85.

Spring Rye

A distinct variety from Winter Rye and more productive. If sown for seed purposes can be treated same as wheat. If for green fodder care should be exercised to cut directly it is in head, otherwise it becomes unpalatable to stock. If cut early can harvest a second crop a month after the first crop. Write for prices on a quantity. Per bushel, 75c.

Flax

During the season of 1895 and '96, on strong recommendation of the Minister of Agriculture for this province, many farmers commenced to cultivate Flax. This, together with a limited market, resulted in low prices. These conditions are completely changed during the past two years and now form profitable cultivation. A flax crop prepares the land for wheat. We have found it almost impossible to procure reliable seed in Manitoba—seed that we were sure would be free from noxious seeds. We have, therefore, imported some pure seed that we can recommend. While the price is high, we are confident that it will pay the producer.

Manitoba seed (limited quantity), per bus., \$1.75.

Imported seed, per bus., \$2.15.

Corn (Ensilage)

We find an increasing demand for ensilage corn every year. Many farmers would not be without ensilage. Owing to early frosts in this northern country there are only a few varieties which succeed well. We carry in stock only those which have been highly recommended by Supt. Bedford. For some years past only North Dakota Flint was sown. Last year the price being so high, prohibited its being sold, and forced us to import another variety, viz., "Pearce's Early Prolific." This proved an excellent corn, well adapted to this country and fully equal to the North Dakota Flint. Cultivation.—Succeeds best when sown in rows three feet apart. Most grain drills can be used for this purpose by closing up some of the spouts. One half bushel seed per acre is sufficient. The plant should stand 3 to 9 inches apart in the row. Time of sowing is from May 15th to 24th, according to the seeding.

NORTH DAKOTA FLINT (yellow), per peck, 50c., per bus., \$1.65.

NORTH DAKOTA FLINT (white), per peck, 50c., per bus., \$1.65.

PEARCE'S EARLY PROLIFIC (yellow), per peck, 50c., per bus., \$1.60.

If in quantities of 5 bushels or more, price per bus., \$1.50.

Speltz

This is a new cereal for the west. Speltz is a coarse kind of grain from Austria, resembling barley, although it properly belongs to the wheat family. Spring frosts will not damage it. Stands drouth better than any other grain. In the spring of '99 one farmer in Manitoba sowed on light blue land 8 bushels, and threshed therefrom 400 bushels. This farmer says it is "the best cattle, horse and hog feed that grows." 56 lbs. constitute a bushel, and one bushel sows an acre. Price per 10 lbs., \$1.00.

Buckwheat

JAPANESE.—Best of all. The kernels are much larger than common varieties; straw is stiff and strong, branches freely and does not require so much to the acre. Per lb., 10c., per bus., \$1.80.

SILVER HULLED.—Seed grown in Manitoba. Per lb., 10c., per bus., \$1.65.

A. E. McKENZIE & CO., BRANDON, MAN.

When writing Advertisers, always mention The Nor'-West Farmer.

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Brandon Seed House Catalogue.

FIELD GRASSES.

DEPARTMENT 1, B.

The day was, when the farmers of Manitoba and the Territories depended entirely upon the wild prairie grass for hay, but that day is past. Every up-to-date farmer now has his cultivated hay meadow upon which to rely for hay and pasture. In a few years the hay meadows of this country will equal those to be found in any part of Eastern Canada. We see the situation and we propose to be in the front rank in this department—Field Grasses.

Don't look for all the grasses known, to be enumerated on this list, as you will not find them here, for the reason that half of the many varieties are not adapted to this country. It is not an inflated list that is wanted; but as we intimated before, it is a catalogue characteristic of the west, because it calls the attention of the producer only to those varieties best adapted to the country, as recommended by Supt. Bedford and confirmed by practical experience. BRANDON SEED HOUSE RE-CLEANED CLOVERS AND GRASSES are becoming well known throughout the West, because they are found to be what we say they are. Our stock is carefully selected and of high germinating test. We don't say our seeds are the cheapest, but we maintain there are none better. When to be sent by mail, add 6c. per lb. to pay postage and cost of small bags which we require to use when sending clovers, etc., by mail.

Timothy

We never offered better qualities for sale than we do this year. Any of these 3 varieties will give good satisfaction. The "Amethyst," or medium quality, will please any purchaser. Sow about 8 lbs. to the acre.

BERYL QUALITY (select)—lb. 10c., 10 lbs. 75c., bus. \$2.90.

AMETHYST QUALITY—lb. 10c., 10 lbs. 65c., bus. \$2.65.

ONYX QUALITY—lb. 10c., 10 lbs. 60c., bus. \$2.50.

Brome

(Awnless Brome Grass.)

Few grasses have had as favorable and rapid introduction as Brome. Its progress has been phenomenal. To say with "leaps and bounds" is to put it mildly. Supt. Bedford, of the Experimental Farm, Brandon, and Supt. McKay, of the farm at Indian Head, have been carefully experimenting for some five or six years past, with very satisfactory results, and are fully justified in the high recommendation they have given it. Brome is widely used in Manitoba, the Territories and the North Western States. We sold enormous quantities of this seed last year. We propose to continue our little part this year, and that is to offer every agriculturist a first-class seed at a reasonable price.

CULTIVATION.—Succeeds on all classes of soil, giving a much better crop on upland than any other kind. It is a perennial grass, and can be depended upon for hay two seasons, and an unlimited time for pasture. Starting early in the spring, and remaining very late in the fall,

it is unequalled for pasture purposes. It is found that better results are obtained from spring-plowed stubble than from any other. Plowing and sowing should be done from May 15th to June 15th. Harrow once, sow broadcast by hand, or use Thompson's drill, sowing at the rate of 15 lbs. per acre, then harrow a second time. It is not advisable to sow with a grain crop, as in a dry year the grain plant absorbs so much of the moisture, and in a wet year the rapid growth of the grain crop chokes the growth of the young Brome plant. As soon as weeds and volunteer crop are sufficiently high they should be mown, and the cuttings left on the ground to act as a mulch. If this plan is followed, good pasture will be had the first fall, and a good crop of hay next season.

RUBY quality, re-cleaned, all grown by one man who has specialized in Brome for four years with remarkable success. It is the heaviest seed we have ever sold. Price, lb. 20c., 14 lbs. \$2.10, 100 lbs. \$13.50.

PEARL quality, carefully selected seed, well cleaned and native grown. Price, lb. 20c., 14 lbs. \$2, 100 lbs. \$12.

Western Rye Grass

This grass is a native of our prairies. Not a few agriculturists are loud in their recommendation of it, but those who have made careful tests of Brome and Western Rye give Brome the preference. CULTIVATION.—The same treatment applies to this grass as to Brome. Choice re-cleaned, and grown by one man, lb. 10c., 14 lbs. \$1.25, 100 lbs. \$8.

Red Clover

As to the adaptability of Red Clover to this country, Supt. Bedford's tests of recent years have been highly satisfactory, and he strongly recommends its cultivation. Treat much the same as Brome.

SUPERFINE, choice, re-cleaned, etc., lb. 25c., 10 lbs. \$2, 100 lbs. \$15.

FINE, very desirable seed, lb. 22c., 10 lbs. \$1.75, 100 lbs. \$14.

White Clover

White Dutch variety, re-cleaned (same treatment applies as to Red), lb. 25c., 10 lbs. \$2, 100 lbs. \$15.

Kentucky Blue Grass

An old grass and well known, used most generally for grass plots and lawns, lb. 25c., 10 lbs. \$2, 100 lbs. \$15.

Canadian Blue Grass

A very hardy grass; should not be confounded with Kentucky Blue Grass. Canadian Blue Grass shoots its leaves very early. It is especially relished by sheep. It does well on dry, sandy, thin soil. Should be used more for lawns and permanent pastures, lb. 20c., 10 lbs. \$1.50, 100 lbs. \$12.

Alfalfa, or Lucerne.

We carry this seed in stock for the benefit of some of our customers in the Okanagan district of B.C. It is not very well adapted to Manitoba, the winters being too severe, killing the plant, lb. 25c., 10 lbs. \$2, 100 lbs. \$15.

Red Top

Fancy, re-cleaned, lb. 25c., 10 lbs. \$2, 100 lbs. \$15.

A. E. McKenzie & Co.'s Lawn Grass Mixture.

OUR 1900 SPECIAL.

We are in a position to commend our "Mixture," as it is the result of years of experimental tests made by Supt. Bedford. It is a mixture of various grasses that have proven themselves to be the best adapted to Northwestern soil and climatic conditions. It will not pay you to experiment, or buy mixtures not knowing whether they are adapted or not. We only keep one quality, and that is our SUPERFINE LAWN GRASS MIXTURE. To get good results, sow at the rate of 10 to 12 lbs. to a quarter of an acre. Price, 1 lb. and under 10 lbs. 25c., 10 lbs. and over 20c. per lb.

Hungarian and Millet

These are two distinct species, although Hungarian is really a Millet species. They are annuals, and may be sown later than any kind of grain crops. From May 25th to June 1st is the best time to sow. 23 lbs. seed is used per acre, and to be sown directly after land is plowed in order to make use of the moist soil thrown up by the plow. It is advisable to harrow once before seeding, and once after. Summer-fallow land can be used, but fall plowing should never be used, as it is too dry.

HUNGARIAN, selected and re-cleaned, bus. \$1.65.

MILLET, selected and re-cleaned, bus. \$1.65.

VEGETABLE SEEDS.

DEPARTMENT 2, A.

In this department we propose to offer the people of the West (Manitoba, Territories and B.C.) a line of seeds the quality of which is unexcelled. We aim to establish the confidence of every purchaser of our seeds, so that after having used them one season they will want to buy them again. Our motto is: "What we have we'll hold."

As intimated in this catalogue elsewhere (Department 1, B), it is a catalogue characteristic of the West, because it confines itself to the needs of the country. There are a number of varieties of the various species of seed that are almost worthless for sowing in this country. In order, therefore, to aid our customers in choosing varieties that are best adapted and that will give the best results, we avoid the recognized method of arrangement in alphabetical order, and save you time, as well as assist you in selection, by enumerating the very best adapted varieties first. These are based on tests made by Supt. Bedford on the Government Farm, Brandon. Please remember these are the results of years of careful experimenting, and you cannot make a mistake in buying our seeds.

A. E. McKenzie & Co., Brandon, Man.

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Brandon Seed House Catalogue.

Asparagus

(Sow 1 oz. for 60 ft. of drill.)

COLUMBIA MAMMOTH WHITE.—Gives immense yields of clear, white shoots, which remain so without earthing or blemishing as long as fit for use, pkt. 5c., oz. 10c., $\frac{1}{4}$ lb. 20c.

CONOVER'S COLOSSAL.—A standard sort, color deep green, quality first class, spreads less than other sorts, pkt. 5c., oz. 10c., $\frac{1}{4}$ lb. 15c.

Beans—Dwarf, Stringless, Wax Pod

(2 lbs. to 100 ft. in drills. Add 4c. per lb. for postage.)

GOLDEN WAX OR BUTTER.—(Imported.) Early flats, yellow pod, very succulent and tender when full grown, and productive, pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 75c.

BLACK-EYED WAX.—Seed white, with black marking round the eye. Earliest of all wax beans, pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. \$1.

CRYSTAL WHITE WAX.—Early, round, translucent pod. A very desirable planter, pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 75c.

MAMMOTH RED WAX (Giant's Wax).—Pods are long and in abundance, very large, of fine flavor; a good main crop wax bean for family or market gardens. It is a later variety, pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. \$1.

DETROIT WAX.—An improved golden wax, and less liable to rust; pods also are a little broader and longer, pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 75c.

EXTRA EARLY RED VALENTINE.—Very early, pods are thick and fleshy, with but little string, pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 85c.

FLAGOULET RED WAX.—Pods flat, yellow, stringless, long and broad, pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 75c.

SCARLET RUNNERS.—The best of the pole or running bean; ornamental and useful; the vine is graceful; flowers are of a brilliant scarlet, and the beans are of excellent quality, either when shelled or in a dry state, pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 90c.

EARLY BOSTON NAVY.—Distinctly a field variety, an excellent bean for this country; fully matures and ripens. Farmers in this country should grow more of these, pkt. 75c., bus. \$2.50.

Beet

(1 oz. to 50 ft. of drill; 5 to 6 lbs. per acre.)

EXTRA EARLY FLAT EGYPTIAN.—Has no superior for earliness; deep blood color, pkt. 5c., oz. 10c., 2 oz. 15c., $\frac{1}{4}$ lb. 25c., lb. 60c.

HALF LONG DEEP BLOOD RED.—This is rapidly becoming a very popular sort, and will probably produce more bushels from a given area than any other sort, as it does not occupy as much space in the row as the turnip shaped varieties, pkt. 5c., oz. 10c., 2 oz. 15c., $\frac{1}{4}$ lb. 25c., lb. 65c.

LONG DARK SMOOTH BLOOD RED.—Late, deep blood color, pkt. 5c., oz. 10c., 2 oz. 15c., $\frac{1}{4}$ lb. 20c., lb. 60c.

ARLINGTON BLOOD TURNIP.—(Improved.) Round, of medium size and exterior, fine quality, dark, rich blood red in color, pkt. 5c., oz. 10c., 2 oz. 15c., $\frac{1}{4}$ lb. 20c., lb. 65c.

NOTE.—We do not enumerate the Sugar Beet varieties, as they are not successful in this country.

Borecole, or Kale

DWARF GREEN SCOTCH CURLED.—Dwarf, spreading early, rarely producing plants over 17 in. high; quite hardy, pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 55c.

TALL GREEN SCOTCH CURLED.—Grows about 3 ft. high, pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 55c.

Cabbage—Early varieties

(1 oz. will produce 1,500 plants.)

WINNINGSTADT.—Very early sort, will grow a hard head under circumstances where most will fail; heads regular, conical, very hard; there is no bitter, ptk. 5c., oz. 20c., 2 oz. 35c., $\frac{1}{4}$ lb. 45c.

EARLY JERSEY WAKEFIELD.—Heads very hard, compact, solid and of conical shape; few outside leaves, ptk. 5c., oz. 30c., 2 oz. 50c., $\frac{1}{4}$ lb. 90.

FILDERKRANT.—Solid pointed heads, ptk. 5c., oz. 15c., 2 oz. 25c., $\frac{1}{4}$ lb. 45c.

VANDERGAU.—Very desirable for market gardeners; a very sure header, large solid heads, ptk. 5c., oz. 30c., 2 oz. 55c., $\frac{1}{4}$ lb. 90c.

Cabbage—Late or Main Crop varieties

LARGE DRUMHEAD.—A reliable, ptk. 5c., oz. 15c., 2 oz. 20c., $\frac{1}{4}$ lb. 45c.

LUPTON.—Embodies all the points to be desired in a late cabbage; color dark bluish-green; stems short and strong; heads large but not coarse; an excellent keeper, ptk. 5c., oz. 30c., 2 oz. 45c., $\frac{1}{4}$ lb. 85c.

MARBLEHEAD MAMMOTH.—One of the largest varieties known. Ptk. 5c., oz. 25c., 2 oz., 45c., $\frac{1}{4}$ lb., 75c.

PREMIUM FLAT DUTCH.—Large head, round, solid, broad and flat on top. Ptk. 5c., oz. 25c., 2 oz. 35c., $\frac{1}{4}$ lb., 50c.

Cabbage—Red Varieties.

EXTRA BLOOD RED DRUMHEAD.—Heads round in shape, of deep color, hard, solid. Ptk. 5c., oz. 20c., 2 oz. 30c., $\frac{1}{4}$ lb. 55c.

MAMMOTH RED ROCK.—The largest Red Cabbage known. Heads are a deep red color inside and out. Ptk. 5c., oz. 25c., 2 oz., 40c., $\frac{1}{4}$ lb., 75c.

Carrot—Garden.

1 oz. to 100 feet of drill. 4 lbs. per acre.

CHANTENAY.—Beats them all in the west. A first-class table variety; beautiful rich orange color, of finest quality; medium early, small tops. Ptk. 5c., oz. 10c., $\frac{1}{4}$ lb., 25c., 1 lb., 75c.

HALF LONG SCARLET NANTES.—(Stump Rooted).—A fine intermediate variety. Ptk. 5c., oz. 10c., $\frac{1}{4}$ lb., 20c., lb. 65c.

EARLY GEM, GUERADE, OR OX-HEART.—Very thick and short, very fine quality for table use. Can be easily

pulled. Pkt., 5c., oz., 15c., $\frac{1}{4}$ lb., 25c., 1 lb., 80c.

For Field Carrots, see under Department 2-B.

Cauliflower

EARLY SNOWBALL (Henderson's).—(Selected from finest stocks obtainable). Has no superior. More extensively grown than any other variety, both for forcing or wintering for early crop, very early and hardy. Makes a compact, solid head. We simply call your attention to this one variety and recommend it before all others. Every experienced gardener knows that there is no more important seed than this. It is one of the seeds that price should have little consideration. It is an expensive seed; but cheap as against buying a poor quality. Pkt. 20c., $\frac{1}{4}$ oz. 85c., $\frac{1}{2}$ oz. \$1.50, oz. \$2.50.

Celery

1 oz. for 2,000 plants.

"WHITE PLUME."—Beautiful, crisp and firm, of a rich nutty flavor. It is the earliest known and unsurpassed for fall and early winter. Pkt. 5c., oz., 30c., 2 oz., 45c., $\frac{1}{4}$ lb., 85c.

"PINK PLUME."—Similar to White Plume, except that the stocks are delicately marked with pink. It has also the rich nutty flavor of the celeries. Pkt., 5c., oz., 25c., $\frac{1}{4}$ lb., 85c.

"GIANT PASCAL" (White).—A large growing sort, of superior flavor. Excellent for late use. Easily blanched. Pkt., 5c., oz., 20c., $\frac{1}{4}$ lb., 65c.

"LONDON PRIZE RED."—A beautiful red celery, and does exceedingly well in this country. You ought to try this. Pkt., 10c., oz., 35c., $\frac{1}{4}$ lb., \$1.50.

"PARIS GOLDEN YELLOW."—This is an excellent celery, very early, almost entirely self-blanching, very attractive, golden yellow, a splendid keeper. We highly recommend it. Pkt., 10c., oz., 60c., $\frac{1}{4}$ lb., \$1.70.

Corn—Garden Sorts

1 lb. to 100 hills. Add 4c. per lb. for postage.

"EARLY WHITE CORY" (white cob).—very early variety, produces ears of good size; rich, sweet and juicy. Excellent user, very desirable for this country. Lb., 20c., 5 lb., 85c., 10 lb., \$1.50.

"CORY" (Red Cob).—Similar in all points to the White Cob, except in color. Lb., 20c., 5 lbs., 70c., 10 lbs., \$1.25.

"FIRST OF ALL"—A few days earlier than the Cory, making it a very profitable variety for market gardeners. Lb., 15c., 5 lbs., 65c., 10 lbs., \$1.75.

"MITCHELL'S EXTRA EARLY."—Great for this country. Lb., 15c., 5 lbs., 70c., 10 lbs., \$1.25.

Cress, or Pepper Grass

"EXTRA TRIPLE CURLED."—Best for salads. Pkt. 5c., oz. 25c., 1 lb. \$1.00.

"WATER CRESS."—An aquatic plant, and when rooted, should be transplanted to the banks of a running stream. Pkt., 10c., oz., 50c.

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Cucumber

1 oz. for 50 hills, 2 to 3 lbs. in hills for an acre.

"CHICAGO PICKLING."—A well known standard cucumber, fruit medium length, pointed at each end, color deep green, thickly spined. Pkt., 5c., oz., 15c., $\frac{1}{4}$ lb., 25c., lb., 65c.

"COOL AND CRISP."—One of the best for table use, tender and crisp for slicing, desirable for pickling and very early. Pkt., 5c., oz., 10c., $\frac{1}{4}$ lb., 20c., lb., 45c.

EARLY CLUSTER.—Fruit small, prickly, grows in clusters, prolific. Pkt., 5c., oz., 15c., $\frac{1}{4}$ lb., 20c., lb., 50c.

EXTRA EARLY RUSSIAN.—An early pickling variety. Pkt., 5c., oz., 15c., $\frac{1}{4}$ lb., 25c., lb., 60c.

FORDHOOK WHITE SPINE.—Large and fleshy. Pkt., 5c., oz., 15c., $\frac{1}{4}$ lb., 25c., lb., 60c.

GIANT PERA.—Very large, smooth skin, few seeds, splendid for slicing. Pkt., 5c., oz., 15c., $\frac{1}{4}$ lb., 25c., lb., 70c.

"PARIS PICKLING."—Entirely distinct and one of the best for pickling. When the young cucumbers are of the proper age for pickling, are crisp and slender, from 3 to 5 inches in length. Pkt., 5c., oz., 25c., $\frac{1}{4}$ lb., 45c., lb., \$1.35.

ROLLINSON'S TELEGRAPH.—A very reliable variety, dark green in color, quick in growth, with very smooth neck, and usually prolific. Pkt. 25c.

WHITE WONDER.—A white skin; does well in the west. Pkt. 25c.

Kohl Rabi.

Early White Vienna, white ball. Pkt. 5c., oz. 25c.

Early Purple Vienna, purple ball. Pkt. 5c., oz. 25c.

Lettuce

(1 oz. for 3,000 plants. 1 oz. will sow a row of 100 feet.)

"DENVER MARKET."—An early heading variety, forms beautiful, large, solid heads, very tender and excellent flavor. Pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 50c.

"CALIFORNIA CREAM BUTTER."—Solid heads, outside medium green, inside rich creamy yellow. Pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 45c.

GRAND RAPIDS.—Large and tender; while not making solid heads, the leaves are of a superior quality. Pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 50c.

"PARIS WHITE COS."—Upright, crisp and tender. Pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 45c.

"HANSON."—A fine head variety, of large size. One of the best for home use. Pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 45c.

Melon—Musk

"EARLY HACKENSACK" (early).—Flesh green, somewhat coarse, but juicy and sweet. Pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 35c.

PAUL ROSE (Petoskey).—A good melon for shipping, a good keeper, and has unusually small seed cavity, firm, of delicious quality. Pkt. 5c., oz. 20c., $\frac{1}{4}$ lb. 60c.

Melon

Citrons for Preserving, 1 oz. to 30 hills. CITRON, COLORED PRESERVING.—Largest and finest, green seed. Pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 30c.

CITRON, FOR PRESERVING.—Common variety, red seed. Pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 25c.

Onion Seed

Onion (American Varieties.) (1 oz. will sow 100 feet, 1 foot apart, 5 lbs. to the acre.)

Our stock of onion seed is the very best, extra select.

EXTRA EARLY RED.—Very early, medium size, good keeper, especially adapted to the northwest country when the seasons are short. Pkt., 5c.; oz., 20c.; $\frac{1}{4}$ lb. 45c.; lb., \$1.65.

AUSTRALIAN BROWN.—The bonanza onion for this country; exceptionally early, proving itself over three weeks earlier than the Wethersfield, will keep in good condition longer than any other variety known. Whoever sows this onion will be pleased with it. Oz. 20c., $\frac{1}{4}$ lb. 60c., lb. \$2.00.

YELLOW GLOBE DANVERS.—Perfectly globe shaped, heavy cropper, excellent keeper and attains large size. In other words a standard onion. Pkt., 5c.; oz., 30c.; $\frac{1}{4}$ lb. 45c.; lb., \$1.45.

RED GLOBE.—A standard Red Globe; very productive and a splendid keeper. Pkt., 5c.; oz., 20c.; $\frac{1}{4}$ lb., 65c.; lb., \$2.50.

LARGE RED WETHERSFIELD.—The standard red sort. It attains a large size, excellent flavor and a good keeper. Pkt., 5c.; oz., 20c.; $\frac{1}{4}$ lb., 50c.; lb., \$1.50.

GIANT PRIZE TAKER.—The name is suggestive. This onion has become a great favorite on account of its large size and great solidity. It is perfectly globe shaped, with bright straw colored skin. The necks are very small and the onion always ripens up hard. An excellent keeper, exceedingly fine flavor, grows to an enormous size. Pkt., 5c.; oz., 20c.; $\frac{1}{4}$ lb., 60c.; lb., \$2.00.

SOUTHPORT WHITE GLOBE.—Best keeper of the white varieties, large size, excellent for pickling. Pkt. 5c., oz. 25c., oz., 25c.; $\frac{1}{4}$ lb., 90c.; lb., \$3.20.

Onion—Pickling Varieties

EARLY WHITE BARTLETTA.—An extra early small white skinned variety; flesh pure white, very mild in flavor, excellent for pickling. Pkt. 5c., oz. 25c., $\frac{1}{4}$ lb., 85c.; lb., \$3.00.

QUEEN WHITE.—Small, noted for extreme earliness and mildness of flavor; much used for pickling. Pkt., 5c.; oz., 25c.; $\frac{1}{4}$ lb., 85c.; lb., \$3.00.

EARLY SILVERSKIN.—An early, small round white variety for pickling and bunches. Pkt. 5c., oz. 25c., $\frac{1}{4}$ lb. 75c.; lb., \$2.50.

Onion Sets

(One quart for 100 feet of drill, planted one foot apart.)

These quotations subject to fluctuation of market. Purchasers who wish to buy bushel lots or more write for special low quotations.

Dutch Sets (yellow), bushels, about 36 lbs. per lb., 20c.; per measured bushel, \$5.50.

Dutch sets (white), bushel about 40 lbs., per lb. 25c., per measured bushel, \$6.50.

Onion Sets (shallots), bushels about 44 lbs., per lb., 15c.; per measured bushel, \$5.00.

Onion Sets (tops yellow), bushel about 36 lbs.; per lb., 30c.; per measured bushel, \$7.25.

Onion Sets (English Multiplier), bushel about 44 lbs.; per lb., 20c.; per measured bushel, \$5.50.

Onion Sets (White Multiplier), bushel about 40 lbs.; per lb., 30c.; per measured bushel, \$7.25.

Parsnip

(1 oz. to 200 ft. of drill, 5 lbs. to one acre, sown 15 to 18 inches apart.)

HOLLOW CROWN.—The best for general cultivation. Pkts., 5c.; oz., 10c.; $\frac{1}{4}$ lb., 20c.; lb., 70c.

Parsley

TRIPLE CURLED.—Very fine. Pkt. 5c.; oz., 10c.; $\frac{1}{4}$ lb., 20c.; lb., 70c.

Garden Peas

(1 lb. to 40 feet of drill; 2 to 3 bushels in drills per acre; add 4c. per lb. for postage.)

The wrinkled varieties have the best flavor and remain a long time soft. Varieties marked thus * are wrinkled sorts.

Extra Early Varieties.

ALASKA.—Height, 2 feet; seeds, blue; very early, uniform, good flavor. Lb., 15c.; peck, \$1.75.

*NOTT'S EXCELSIOR.—1 foot; a new sort, similar in growth to American Wonder, but pods larger, need no brush, flavor superb. Lb., 15c.; peck, \$2.00.

*WM. HURST.—10 inches; hardy and very prolific. Pods average 3 inches long, and are filled with large peas. Quality excellent. Lb., 15c.; peck, \$2.00.

*MCLEAN'S LITTLE GEM.—A splendid pea, productive and of delicious flavor. Lb., 15c., peck, \$2.00.

*AMERICAN WONDER.—10 inches; seeds green, wrinkled, very early, quality excellent, no brush required; one of the best for private gardens. Lb., 15c.; peck, \$1.90.

Peas—Second Early and Main Crop Sort

*HORSFORD'S EARLY MARKET GARDEN.—2 feet. Prolific, pods well filled, quality unexcelled. They also do well as a field pea in this country. Lb., 15c.; peck, \$2.00.

*HEROINE.—2 feet. One of the best large green wrinkled peas of recent introduction; a profitable variety for market gardens. Lb., 15c.; peck, \$2.00.

*SHROPSHIRE HERO.— $3\frac{1}{2}$ feet. Very productive, quality fine, both pods and peas very large. Lb., 15c.; peck, \$2.00.

*STRATAGEM (Improved)—2 feet. One of the best of many English peas. Pods very numerous on vine, some of them measuring 6 inches long; flavor good. Lb., 15c.; peck, \$2.00.

*YORKSHIRE HERO.— $2\frac{1}{2}$ feet. A good reliable. Lb., 15c.; peck, \$1.75.

Pumpkin

(1 oz. will plant 15 hills; sow 8 to 10 feet apart each way.)

SUGAR, SMALL.—Fine grained, sweet and prolific. Pkt., 5c.; oz., 15c.; $\frac{1}{4}$ lb., 25c.; lb., 75c.

LARGE FIELD.—A large yellow variety, best for field culture. Pkt., 5c.; lb., 40c.

A. E. MCKENZIE & CO., BRANDON, MAN.

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[Continued on next page.]

Brandon Seed House Catalogue.

Radish

1 oz. for 100 feet of drill, 2 lbs for $\frac{1}{4}$ acre.
Radish (Turnip Shaped.)

EARLY SCARLET TURNIP, WHITE TIPPED.—Very early; largely used for growing under grass and out doors. Pkt. 5c.; oz., 15c.; $\frac{1}{4}$ lb., 25c.; lb., 60c.

DEEP SCARLET TURNIP, WHITE TIPPED. Very early. Pkt., 5c.; oz., 15c.; $\frac{1}{4}$ lb., 25c.; lb., 75c.

EARLIEST WHITE FORCING.—Flesh pure white, sweet and firm. Pkt., 5c.; oz., 15c.; $\frac{1}{4}$ lb., 25c.; lb., 75c.

ROSY GEM.—A fine white tipped sort. Pkt., 5c.; oz., 15c.; $\frac{1}{4}$ lb., 25c.; lb., 75c.

Olive Shaped.

EARLY FRENCH BREAKFAST.—Pink skin, white tipped; one of the finest sorts. Pkt., 5c.; oz., 10c.; $\frac{1}{4}$ lb., 20c.; lb., 70c.

EARLY SCARLET.—Pure scarlet. Pkt., 5c.; oz., 10c.; $\frac{1}{4}$ lb., 20c.; lb., 60c.

WHITE.—Mild and firm. Pkt., 5c.; oz., 15c.; $\frac{1}{4}$ lb., 25c.; lb., 75c.

Long Red.

CHARTIER.—Longest of the long red sorts, white tipped, excellent quality. Pkt., 5c.; oz., 15c.; $\frac{1}{4}$ lb., 20c.; lb., 65c.

WOODS' EARLY FRAME.—One of the best for forcing; long red crisp. Pkt., 5c.; oz., 15c.; $\frac{1}{4}$ lb., 25c.; lb., 75c.

Long White.

WHITE NAPLES.—Pure White, slender, for summer use. Pkt., 5c.; oz., 20c.; $\frac{1}{4}$ lb., 25c.; lb., 85c.

WHITE VIENNA OR LADY FINGER.—Pure white, delicate, tender. Pkt., 5c.; oz., 20c.; $\frac{1}{4}$ lb., 35c.; lb., \$1.10.

Horse Radish Roots

Strong Roots, 50c. per doz.

Rhubarb—Seed

JOHNSTON ST. MARTIN.—The finest and one of the earliest rhubarbs; grows enormous size, delicious flavor, color delicate pink. Pkt., 5c.; oz., 30c.; $\frac{1}{4}$ lb., \$1.00.

MYATT'S LINNEAS.—A second early sort, with very long, thick, rounded stalk, superb flavor. Pkt., 5c., oz., 25c.; $\frac{1}{4}$ lb., 75c.

Spinach

VICTORIA.—A new variety, with broad, dark green leaves, valuable for both marketing and family use. Pkt., 5c.; oz., 15c.; $\frac{1}{4}$ lb., 25c.

Sunflower

RUSSIAN GIANT.—A much better variety than the common sort, forms a single large flower; seed very large, chiefly used in this country for feeding pet birds such as parrots and fowls, lb. 25c., 10 lbs. \$2.

Squash

(1 oz. for 50 hills, hills 4 ft. apart.)

VEGETABLE MARROW, LONG WHITE BUSH.—Longer than the English, bush form, pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 50c.

ENGLISH VEGETABLE MARROW.—Stem greenish-yellow, flesh white, pkt. 5c., oz. 15c., $\frac{1}{4}$ lb. 40c.

EARLY ORANGE YELLOW.—Pkt. 5c., oz. 10c., $\frac{1}{4}$ lb. 25c.

Tomato

(1 oz. to 1,500 plants.)

EXTRA EARLY ATLANTIC.—(Early Ruby.) This Tomato leads them all. Earliest in cultivation; possesses all the points coveted by a producer, pkt. 5c., oz. 25c., $\frac{1}{4}$ lb. 60c.

EARLIEST OF ALL.—There is little choice between this and the above Tomato, pkt. 5c., oz. 25c., $\frac{1}{4}$ lb. 75c.

SMALL-FRUITED.—Strawberry or Ground Cherry, a distinct species, good for preserving, pkt. 10c., oz. 75c.

FIELD ROOT SEEDS.

DEPARTMENT 2, B.

We are giving much attention to this department, for the reason that field roots will be in greater demand from year to year as farmers increase their herds. The feeding properties of field roots for cattle, horses, sheep and hogs are invaluable.

Our Field Root Seeds will please you.

Carrot

3 to 4 lbs. per acre.

GIANT WHITE VOGES.—Very long, but short roots, smooth, yield well. Pkt. 5c., $\frac{1}{4}$ lb. 20c., lb. 50c.

"COOPER'S YELLOW INTERMEDIATE."—Solid, crisp, a good cropper and easily harvested. Pkt. 5c., $\frac{1}{4}$ lb., 25c., lb., 65c.

LONG ORANGE, OR ORANGE BELGIAN.—A good standard carrot. Pkt. 5c., $\frac{1}{4}$ lb. 20c., lb. 60c.

Mangel Wurtzel

(Sow 4 to 6 lbs. per acre.)

Add 4c. per lb. postage.

SELECTED MAMMOTH, LONG RED (Prize Mammoth or Saw-Log).—Produces as large crops as any variety known. Lb. 30c. 5 lbs. or over at 27c.

GIANT LONG RED.—A good standard variety. Lb. 25c., 5 lbs. or over, 28c.

MAMMOTH YELLOW INTERMEDIATE.—Not so large a cropper as Mammoth Long Red, but is superior to that variety in quality. Lb. 30c., 5 lbs. and over, 27c.

"GIANT YELLOW GLOBE."—A good keeper, does well in this country. Lb. 25c., 5 lbs. and over, 28c.

Turnips

(Sow 2 to 4 lbs. per acre. Add 4c. per lb. for postage.)

PURPLE TOP SWEDES.

Carter's Imperial Purple Top.—A splendid variety for this country, hardy and a good keeper. Pkt. 5c., lb., 25c., 5 lbs. and over, 28c.

"RENNIE'S PRIZE".—Fine globe shaped, with single tap root, and great yielder. Keeping qualities good. Pkt. 5c., $\frac{1}{4}$ lb. 15c., lb., 30c.

ELEPHANT, OR JUMBO.—Skin dark red above ground, and yellow below. Fine grained and sweet flavor. Pkt. 5c., lb. 30c., 5 lbs. and over, 25c.

SHAMROCK.—A good standard variety. Pkt. 5c., lb. 25c. 5 lbs. and over 20c.

Rape

For some years past we have been offering to the farmers of this country "Dwarf Essex Rape." We have this variety in stock this year, but we also have imported the variety known as "Dwarf Victoria," which excels "Dwarf Essex" almost beyond comparison. It only costs 50c. a ton to grow "Dwarf Victoria," and it is worth as a green food for sheep, cattle and hogs more than any other food available. It is particularly adapted for being sown as a catch crop. Like the turnip it grows better late than earlier in the season. When grain crop has failed from any cause whatsoever, there is ample time to plow the land, and sow Rape upon it. Some farmers in Manitoba sow it on their summerfallow for green feeding in the fall. Try our "Dwarf Victoria." It will cost you more, but it will pay you doubly. If you buy it for 1900 you will want it for 1901.

Culture.—Sow broadcast or in drills 3 feet apart. Drill sowing is usually preferred, as it is much easier to keep the crop clean if sown by this plan. Sow about 2 lbs. per acre about May 20th.

DWARF VICTORIA (new imported variety).—25c. per lb.

DWARF ESSEX (ordinary variety).—10c. per lb.

Market Gardeners

Are requested to write us for our SPECIAL PRICES to market gardeners, on vegetable seeds of all kinds. We can save you money.

Herb Seeds

Below are a few HERB SEEDS, which are mostly used in this country:—

Borage, for bee pasturage. Pkt. 5c., oz. 25c.

Sage. Pkt. 5c., oz. 15c., lb., \$1.40.

Summer Savory. Pkt. 5c., oz. 15c., lb., \$1.20.

Thyme. Pkt. 5c., oz. 25c., lb. \$1.60.

FLOWER SEEDS.

DEPARTMENT 2 C.

Packet.

287 Alyssum, Little Gem 5c.

288 Alyssum, Sweet 5c.

340 Antirrhinum (Snapdragon) Tall Mixed 5c.

339 Antirrhinum (Snapdragon) Dwarf Mixed 5c.

165 Asters, Blanche Lyon Mixed . . 5c.

266 Asters, Tall Mixed, all sorts .. 5c.

267 Asters, Dwarf Mixed, all sorts. 5c.

469 Balsam, Fine Double Mixed .. 5c.

560 Candytuft, White Rocket .. . 5c.

562 Candytuft, Fine Mixed 5c.

603 Carnation, Marguerite Mixed .. 5c.

689 Convolvulus (Morning Glory) Tall Mixed 5c.

740 Dianthus, Chinensis Mixed (China Pinks) 5c.

747 Dianthus, Mammoth Single Pinks, Mixed 5c.

A. E. MCKENZIE & CO., BRANDON, MAN.

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[Continued on next page.]

Brandon Seed House Catalogue.

Flower Seeds (continued.)

814 Eschscholtzia, California Poppies, Mixed	5c.	1447 Phlox Drummondi, Giant Flowered, Mixed	5c.	Campanula (all varieties).
831 Everlasting Flowers, Mixed	5c.	1458 Phlox Drummondi, Fringed, Mixed	5c.	Perennial Poppies.
1015 Hollyhock, Extra Choice Double Mixed	5c.	1463 Phlox Drummondi, large flowering, mixed	5c.	Dictamnus Frasinella.
1080 Larkspur, Dwarf, Double Mixed	5c.	1495 Poppy, Fine Double, Mixed .. .	5c.	Gaillardia Grandiflora.
1081 Larkspur, Tall, Double Mixed	5c.	1508 Portulaca, Fine Single, Mixed ..	5c.	Linum Flarum.
1109 Lobelia, Trailing Sorts, Mixed	5c.	1774 Stocks, German Ten Weeks, Mixed	5c.	Aquilegia (all varieties).
1116 Lobelia, Compacta Crystal Palace	5c.	1680 Sweet Peas, Blanche Burpee (White)	5c.	Platycodon Grandiflorum
1165 Marigold, Fine Mixture	5c.	1681 Sweet Peas, Blanche Ferry (Pink and White)	5c.	Hesperus Matronalis.
1207 Mignonette, Machet	5c.	1685 Countess of Radnor (Pale Mauve)	5c.	—————
1211 Mignonette, Sweet, Large Flowering	5c.	1690 Sweet Peas, Firefly (Scarlet) .. .	5c.	Flax (for feeding), \$1.50 per bus., 56 lbs.
1275 Nasturtium, Tall, Md'c Guther's Hybrids	5c.	1697 Sweet Peas, Mrs. Jos. Chamberlain (Striped)	5c.	Ground Flax, \$3.00 per cwt.
1279 Nasturtium, Tall Mixed	5c.			Oil Cake, \$1.75 per cwt.
1300 Nasturtium, Tom Thumb, Mixed	5c.			Canadian Cattle Food, 50c. 4 lbs.
1301 Nasturtium, Dwarf, Mixed	5c.			Bags (cotton) of all kinds, price according to quality.
1356 Pansy, Rennie's Perfection, Mixed	5c.			Sacks (jute), of all kinds, price according to quality.
1376 Pansy, Giant Trimardeau, Mixed	5c.			OUR ELEVATOR.
1385 Pansy, Largest Flowering, Mixed	5c.			Is situated by the Northern Pacific Railway track in this city. Open every month in the year. (We do custom chopping.)
1390 Pansy, Choice Mixed	5c.			OUR ELEVATOR AT CHATER
1421 Petunias, Grandiflora, Large Flowering, Single, Mixed	5c.			Is open for receiving grain during the months of September, October, November, December, March, April, May.
1407 Petunias, Hybrids, Fine Mixed	5c.			In addition to our seed business, we handle Wheat, Coarse Grain and Cereal Products of all kinds.

The following perennial flowers have been found to give excellent satisfaction at the Experimental Farm, Brandon. We would strongly recommend busy people who have not time to sow and attend to annuals to sow perennial flowers:—

Aconitum Napellus (Monkshood).
Coreopsis Lanceolata.
Lynchnis Chalcedonica.
Lynchnis Haagiana Hybrids.
Perennial Larkspur (all varieties.)

BROME.

Every Farmer in Manitoba and the Territories should sow BROME GRASS SEED THIS YEAR. We are headquarters for this Seed in this country. You will think so when we tell you that during the last two weeks of February of this year we have sold over 14,000 lbs., and our trade has hardly commenced. Our prices are right. Get in the front rank and sow Brome. Order early.

Half Rates.

We wish to intimate to the farmers of this country that the railroads in Manitoba and Territories give **half rates** on **Seed Wheat, Oats and Barley**. This will reduce the cost of your purchases from us to a minimum.

A. E. MCKENZIE & CO.,

OFFICE AND WAREHOUSE SITUATED 9th ST. SOUTH,
Opposite C. P. R. Passenger Depot.

Brandon, Man.

J. I. CASE

THRESHING
MACHINE CO.

Racine, Wisconsin.

Manufacturers of 'CASE' Engines, Threshers & Powers.

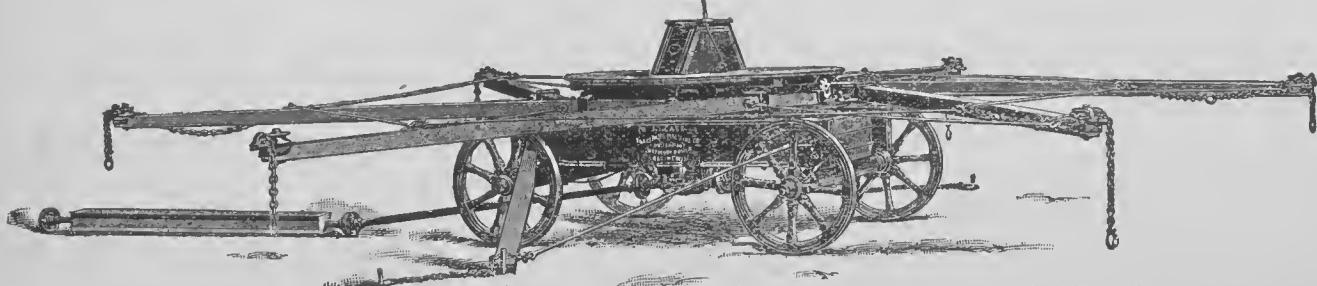


For Information write

WINNIPEG BRANCH,

Cor. Princess and James Sts.

D. B. MACLEOD, General Agent.



THE "WOODBURY" POWER

(Dingley Pattern)

Is the only RELIABLE Horse Power.

WRITE FOR OUR CATALOGUE OF

Engines and Separators.



Western Horticultural Society.

This meeting was held under the presidency of Professor Baird, Winnipeg. The executive reported that they would abandon the giving of plants as a premium to new subscribers and would give instead a copy of Green's Amateur Fruit Grower. They had devoted a good deal of time to the San Jose Scale Act which, very much owing to the influence of Eastern nurserymen, had been passed to the very serious detriment of Western importers, whose most satisfactory source of supply is the nearest Northwestern States. A little concession has since been made in admitting cottonwoods, but the only satisfactory solution for Western Canada is the entire abolition of the Act so far as it applies here. Further protection for insect-destroying birds is very desirable. Inspection of eastern fruit for the Manitoba market is also very necessary.

The treasurer's statement showed balance on hand from last report, \$21.14, government grant, \$200, fees, \$64. Expenditure, \$282.70, leaving a balance of cash on hand of \$2.44.

OFFICERS ELECTED.

The following officers were then appointed:—President—Rev. Prof. Baird, Winnipeg; vice-presidents—J. Whellams, Kildonan; G. McGregor, Mekiwinn; S. A. Bedford, Brandon; A. P. Stevenson, Nelson; Angus Mackay, Indian Head; R. Alston, Winnipeg. Secretary, A. F. Angus, Winnipeg; treasurer, W. G. Scott, Winnipeg; councillors, G. H. Greig, R. Barclay and R. Waugh; auditor, David Horn.

ONTARIO NURSERY STOCK.

The discussion on the value here of Ontario grown nursery stock took up an hour's time. Some of the speakers have had over 20 years' experience in the importation of plants of various sorts both from east and south and the sum of their experience is that the successes with eastern grown stuff have been small in proportion to the failures. Part of this is due to the fact that most of the nurseries lie too far south, and stock from them gets sweated on the road, sometimes dried in the roots as well, the result being an almost total loss. The west has been for the last 20 years drained of large sums of money spent in abortive attempts to get eastern stocks to grow. If the same class of goods could be had from further north nurseries the loss would be slighter, but the aggregate of experience with the southern Ontario importations has been most discouraging. On the contrary, importations from Minnesota, which has supplied most of our southern stocks, have given a large amount of satisfaction, and a good proportion of the failures has come from delays at the boundary, due to customs regulations. Plants so delayed made poor results.

Alderman Barclay, who has had considerable experience in introducing nursery stock, put in a plea for the Rochester, N.Y., stock, as having made a much smaller proportion of failures than that from Ontario. The members who took part in this discussion were the president and treasurer, and Messrs. Stevenson, Nelson, with whom failures had been very frequent with the following kinds:—Plums, cherries, standard apples, soft

maple, cottonwood, climbing honeysuckle, the majority of rose bushes and sand cherries. The same trees and shrubs from Minnesota had been a great success and gave encouraging results. He hoped the government would see its way clear to remove the restrictions against the importation of nursery stock from the States.

John George of Morden, from 20 years' experience, had moderate success with a few eastern sorts, among which he named Transcendent and crabs, but the failures were far more numerous.

Others who spoke in the same strain were D. D. England, city gardener, R. Alston, R. Waugh, Rev. W. A. Burman, H. Brown and Ald. Barclay.

THE SAN JOSE SCALE.

The following resolution was then brought forward and unanimously agreed to:

"The Western Horticultural Society renews the strong protests which it has offered for the past two years against the operation of the San Jose Scale Bill. This bill prohibits the importation of nursery stock from the United States professedly to keep out the San Jose scale. It is a failure in this respect as will be seen from the following facts:

"(1) The scale is found in considerable quantities in the Niagara district, where are located most of the nurseries from which, so long as this bill continues in force, the rest of Western Canada must be supplied with nursery stock, and notwithstanding the appointment of inspectors and the expenditure of several thousands of dollars each year, the scale is not eradicated.

"(2) The act does not prohibit the importation of fruit on which, as is well known, the scale may be freely brought into the country. An officer of the Dominion government last summer found infected peaches and plums regularly offered for sale in the Winnipeg fruit shops.

"The act, then, does not keep the scale out of Canada, but it does entail upon the people of Manitoba and the Northwest Territories hardships of a very grievous character, for it deprives them of the most natural market for the purchase of nursery stock. The states of Minnesota and Wisconsin have been experimenting for the past forty years on the kinds of fruit trees, shade trees and shrubs which are best adapted to a cold climate, and the remarkably successful results, they have reached are, on account of similarity of climate, altitude, soil and length of season, almost equally useful for the Canadian Northwest. These states and the Dakotas are moreover free from the San Jose scale. To attempt in these circumstances to grow nursery stock brought from Ontario, nearly all of which, to judge from past experience, is sure to die, and to give up hope of getting the benefit of Minne-

The Latest, The Newest The Best.

GOLD STANDARD



INDIA·CEYLON·PACKAGE TEAS

½ & 1 lb Lead Packets — 3 & 5 lb Tins.

CODVILLE & CO. WHOLESALE GROCERS WINNIPEG.

Banner Oats

For sale, 600 bushels Banner Oats, from imported seed. 40c. per bushel. Bags extra. Apply,

ALEX. D. GAMLEY,
Box 193, Brandon, Man.

SUPERIOR QUALITY

BROME GRASS SEED.

16 cents per lb., free by mail.
10 cents per lb., purchaser paying freight.

T. COPLAND, - Saskatoon, Sask.

BROME GRASS SEED

Fine Sample,
\$12.50 per 100 lbs.

BAKER & SKELDING, Macleod, Alta.

Grower and importer of Northern grown

GARDEN, FIELD, AND FLOWER SEEDS

These seeds are strictly fresh, and are imported direct from the largest seed growers. We carry the Largest Stock of seeds in the Northwest. Send name and address for our

FREE ILLUSTRATED CATALOGUE.
J. M. PERKINS, 221 Market Street, WINNIPEG, MAN.

BROME SEED.

A limited quantity of Brome Grass Seed for sale. Free of noxious seeds.

100 lbs. or over	- - -	11 cents per lb.
Less than 100 lbs.	- - -	12½ "
1,000 lbs. or over, price on application.	- - -	

C. STUECK - Abernethy, Assa.

BROME GRASS SEED.

I have 6,000 lbs. of good Brome Grass Seed for sale. Farmers requiring any should write me for price early, as it will soon go.

ELMER SHAW, Kenlis, Assa.

Trees, Shrubs, Fruits.

Do you wish to plant shade or seedling trees shrubs, fruits, flowering plants, or a better variety of seed potatoes?

I can offer you at reasonable prices the best and hardiest you can obtain.

Write for list to

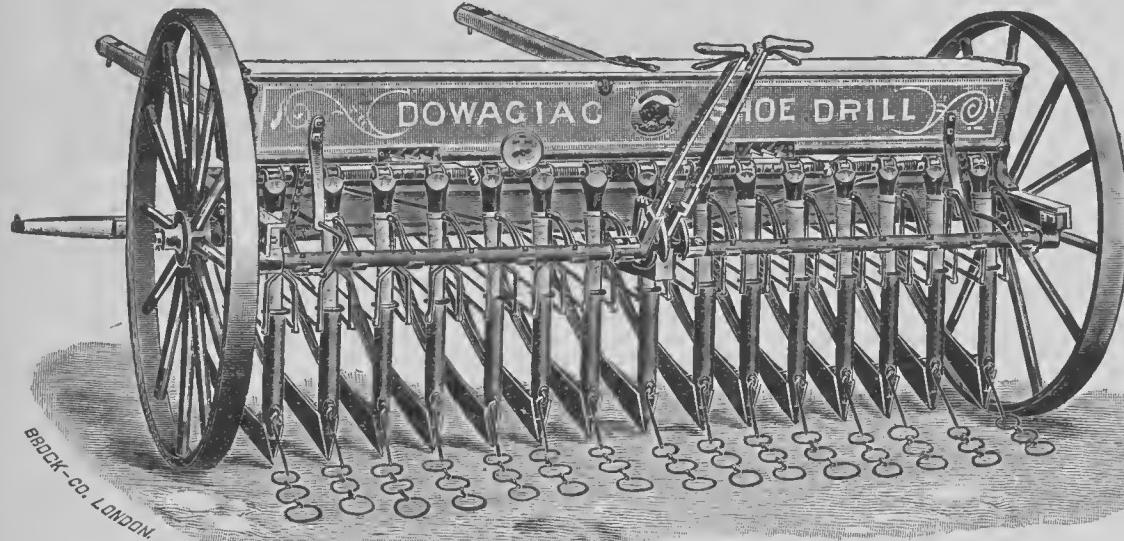
H. L. Patmore, BRANDON NURSERY MANITOBA.

The Stevens Manufacturing Co.'s

Made in Canada by Expert Canadian Workmen on the Dowagiac Pattern, but with parts strengthened and improved.

Undoubtedly the best Grain Seeder made. Specially adapted for use in Canadian Northwest.

SHOE DRILL



BROCK CO. LONDON

THE STEVENS MANUFG. CO.

Head Office : LONDON, ONT.



Branch Office : WINNIPEG, MAN.

sota grown stock which is almost sure to live, is a course which this society protests against, and while it thanks the Dominion government for permitting the importation of American cottonwood seedlings last spring, it asks that similar permission be given this spring to import all nursery stock from Minnesota, Wisconsin and the Dakotas which on inspection is found to be free from the San Jose scale."

Another resolution was passed, by which a committee was appointed to act in conjunction with one from the Brandon society to approach the local government and represent to the Dominion government through the Minister of the Interior on his visit to the city the advisability of removing the San Jose Scale Bill.

BEE KEEPING.

This subject was brought out in a most interesting way. All the papers were from men of ripe experience, who were able out of that experience to give valuable pointers on the handling of the honey makers. Jas. Duncan, Dominion City, read the first paper. He has over 100 hives now wintering, and has had gratifying success losing only a small percentage in winter. He outlined the most important points in both summer and winter management.

Thos. Henderson, Strathcona, spent \$20 on his first hive, brought in from Brantford, Ont. The honey season is short, running from July 1st to past the middle of August. Has had as high as 75 hives. J. Knowles, another veteran in the Edmonton district, has been forced to study out methods adapted to the condition of the country; eastern methods will not do in the west. He found Italians the best strain of bees. Both these gentlemen gave details of great interest to bee-keepers.

Rev. J. Fotheringham, Grenfell, had kept bees in the east and tried them west,

with little satisfaction. His place had no sheltering bluffs and there were other drawbacks incident to his location. Finding local flowers insufficient, he had tried buckwheat and clover, but these did not hold with him.

Besides these papers reference was made to a Frenchman at Notre Dame de Lourdes who has an extensive holding. Every testimony pointed to the imprudence of artificial swarming. Fewer and stronger hives are what should be aimed at. We hope in future issues to give some of these papers.

HOUSE PLANTS.

Alderman Robert Barclay, of Winnipeg, is about the most successful amateur in both indoor and outdoor plant growing. In this field his practice is as good as his preaching. He said there is no use in trying to grow plants along with gas and

the air of most houses is much too dry for flowers, unless artificially dampened. Buy plants at home and avoid all that are overforced. Well rotted turf and old cow dung, along with sand in proportions to suit the nature of the different sorts grown, make the best potting material. Some plants need much water, especially when flowering. When off duty they are frequently over watered. Plants for successful blooming should be kept rather pot bound, free root space means overgrowth and defective flowering. To gradually shift from a small pot to one a size larger is good policy. No country can grow finer geraniums than Manitoba. About one-fifth of rotted cow manure and sand to four-fifths of turf is the right stuff for them. For begonias leave out the manure. Pelargoniums, cinerarias, snowdrops and crocus were named as unsuitable for house growth. Hyacinths make choice house plants if well managed.

*A few years ago Blue
Ribbon Ceylon Tea was
unknown, today it is a
household word. Why?*

HARDY PERENNIALS FOR MANITOBA.

Papers on this subject were read by H. Brown, of the Experimental Farm, Brandon, and Robt. Lloyd, of the Alston's Gardens, Winnipeg. Mr. Brown has gone very fully into the subject, and both his and Mr. Lloyd's paper we hope to give complete in a later issue.

A. P. Stevenson, Nelson, read a paper on Ornamental Shrubs, Hardy in Manitoba. Spruce, Scotch fir, arbor vitae, and mountain ash or rowan, are his prime favorites. A good many deciduous varieties are hardy at Nelson, but in most parts of Manitoba some sorts hardy at Nelson would perhaps prove doubtful. Mr. Stevenson has had large experience with fruits and showed apples hardy and good keepers. Hibernal and Wealthy, the best. Several summer sorts also do well with him.

A paper by H. C. Robey, of the Brandon Experimental Farm, was read by his colleague, H. Brown. This topic elicited much interesting discussion and we hope to give Mr. Robey's paper in a future issue.

FOREST PRESERVATION, TREE PLANTING.

E. C. Stewart, the recently appointed Dominion Inspector of Forestry, gave the last address of the evening. Mr. Stewart's acquaintance with the West dates pretty far back, and his address was followed with much interest. He explained that the object of his appointment was, not only to preserve as far as possible the existing timber of the west, but to do what he could to encourage tree planting in the settled districts. Well planned planting along roadways and round the buildings would add much both to the beauty and value of the farm and it is the intention of the government to give such assistance and advice to intending planters as would promote this end. He is here to find out from actual observation the best methods of planting and propagation and devise the plans by which the intentions of the government can be best carried out.

Forest fires have been a fearful source of waste and forest guardians will be appointed to see that timber cut on government land shall be so managed as to reduce to a minimum the waste caused in this way. Information on tree planting could very well be circulated by means of farmers' institutes and special literature, and the officials of his department would be authorised to visit farmers who desire to go in for tree planting and advise with them as to the most suitable ways of planting with ease and certainty.

In the subsequent discussion it was contended that for exposed and sparsely settled districts one way in which the government would materially aid the cause of tree growing would be to plant stretches of woodland in such ways as to present an object lesson to intending planters, and by their growth to provide shelter in a way that individual homesteaders could not be expected to undertake.

Mr. Mathieson, Brandon, introduced a scheme that has been considerably discussed in that district, of planting trees along the road allowances and allowing part of the width to be enclosed for that purpose. Perhaps the local legislation might need revision to meet this proposal. The advisability of such planting was freely discussed. Some speakers contended that trees would attract and hold snow and thereby help to spoil the sleighing, by holding on or near the roads masses of snow, the melting of which in spring would have a bad effect. One of the objectors was Mr. McKellar, of the Provincial Department of Agriculture. Mr.

Matheson contended that in the open country round Brandon this objection would not hold. The subject is a most interesting one, in view of its prospective effect and any information that would tend to give fuller light on this topic will be welcomed by The Farmer.

It was then moved by W. G. Scott, Winnipeg, seconded by Prof. Bryce and carried unanimously, "that the society is pleased to learn that the Dominion Government is alive to the necessity of preserving the forest areas and encouraging the planting of trees, and regard this as a proper undertaking by the government. These efforts being in line with the work of the society, they have its heartiest support."

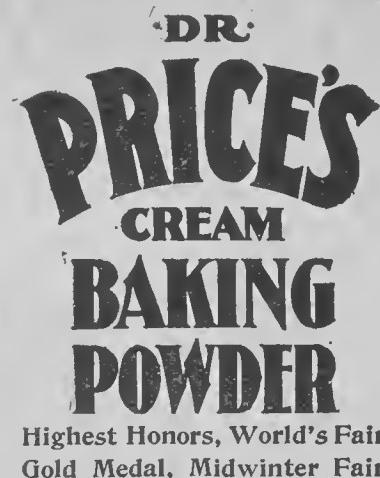
Territorial Crop Statistics.

The Department of Agriculture at Regina has just completed the compilation of Threshers' Returns for the year 1899. Below will be found a statement showing the result of last season's crop in the various sections of the Territories as well as a comparison with the figures for the preceding season.

WHEAT.					
District.	Bushels	Threshed.	Acreage.	Yield	Per Acre.
ASSINIBOIA—					
South East	1,898.	1,899.	1,898.	1,898.	1,899.
South West	727,954	1,261,759	48,530	80,279	15.80
East Central	46,210	35	1,926	3	11.66
Central (II.)	1,142,119	1,079,784	71,372	65,472	16.20
Central (I.)	1,460,317	1,968,666	80,348	104,949	18.00
West Central	900,034	1,301,083	42,850	51,057	21.03
North East	500	1,255	28	32	18.75
North Central—No returns.	175,328	164,009	13,487	10,695	13.27
North West—No returns.					15.53
SASKATCHEWAN—					
East	283,925	238,849	17,002	15,032	17.65
West	14,049	7,518	702	440	20.33
ALBERTA—					
North	627,201	722,016	24,122	28,858	26.10
North Central	27,432	30,647	1,246	1,608	22.25
Central	14,896	8,338	572	471	26.00
South Central	74,905	36,231	3,404	1,707	22.18
South	47,608	66,257	1,983	3,674	24.00
Total	5,542,478	6,946,997	307,580	364,777	
OATS.					
ASSINIBOIA—					
South East	276,219	509,148	14,384	16,721	19.61
South West	17,840	9,086	482	190	37.50
East Central	237,118	470,828	8,469	17,911	28.28
Central (II.)	379,249	595,496	14,558	19,338	25.72
Central (No. I.)	278,761	489,993	11,614	13,921	35.19
West Central	8,000	19,785	160	378	52.03
North East	248,868	246,913	9,218	8,298	27.00
North Central—No returns.					29.75
North West—No returns.					
SASKATCHEWAN—					
East	127,205	164,527	6,840	5,655	18.69
West	16,152	12,472	538	453	30.66
ALBERTA—					
North	1,115,358	1,461,821	24,246	34,080	46.53
North Central	134,853	163,450	3,290	3,804	41.25
Central	130,204	126,822	2,830	2,855	46.50
South Central	182,226	215,006	4,799	5,288	37.41
South	164,206	255,646	3,649	6,724	45.00
Totals	3,316,259	4,740,993	105,077	136,416	
BARLEY.					
ASSINIBOIA—					
South East	45,518	44,685	1,882	2,187	23.77
South West	200	10	10	20.00	
East Central	37,462	33,755	1,629	1,658	23.33
Central (II.)	23,597	19,866	1,204	856	20.35
Central (I.)	14,300	13,822	756	648	19.60
West Central	1,550	2,104	42	47	21.31
North East	8,454	7,640	496	373	38.33
North Central—No returns.					44.82
North West—No returns.					20.52
SASKATCHEWAN—					
East	49,802	37,539	2,276	1,834	22.00
West	1,915	1,193	87	53	22.00
ALBERTA—					
North	213,103	129,421	6,551	4,917	31.02
North Central	17,268	23,876	617	768	28.75
Central	15,603	7,202	447	306	34.83
South Central	16,928	14,484	604	535	23.53
South	15,752	10,865	492	451	27.41
Total	449,512	342,435	17,092	14,633	

It will be noticed that the yield per acre in wheat and oats shows an increase for 1899, while the yield of barley is much below 1898. The total area under cultivation in the Territories was 515,826 acres, as compared to 429,749 acres in 1898. The average yield per acre for the Terri-

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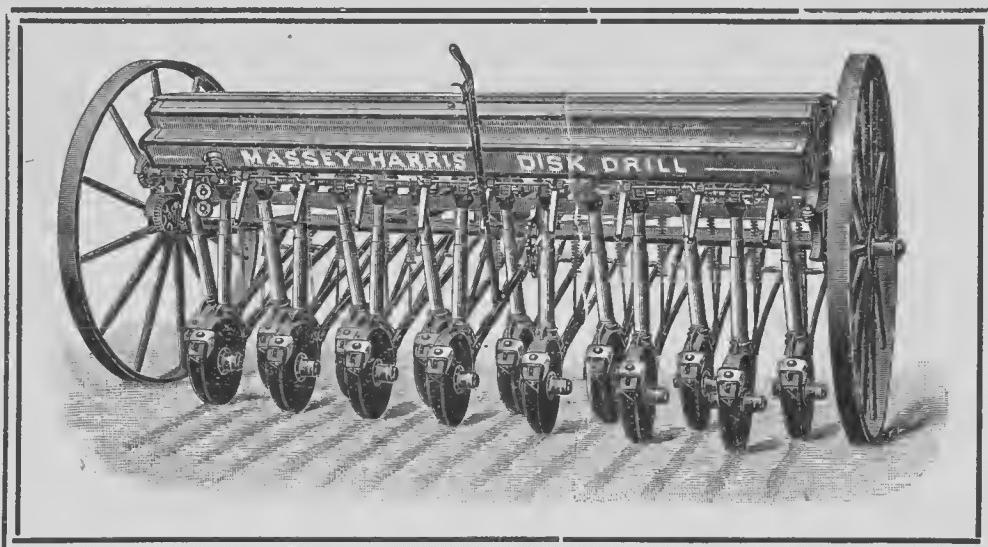


tories, calculated on a basis of each individual return, was as follows: Wheat, 1898, 18.01 bushels; 1899, 19.04 bushels. Oats, 1898, 28.93 bushels; 1899, 34.75 bushels. Barley, 1898, 26.29 bushels; 1899, 23.40 bushels.

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